Access DB# 77214

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Tim Vanoy Examiner # : _____ Date: Oct. 3, 02
Art Unit: 1754 Phone Number 308-2540 Serial Number: 09-508,923
Mail Box and Bldg/Room Location: CP3-9509 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Metal compounds, mixed or sulphated, as phosphate binders.

Inventors (please provide full names): Roberts et al.

Earliest Priority Filing Date: 19 Sept. 1997

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Looking for an iron hydrotalcite, which may be of the general formula: $X_6Fe_2(OH)_{16}CO_3 \cdot nH_2O$, where X is Mg, Ca, Ce or La (please the formula for the hydrotalcite provided on the 1st pg. of the article titled "Hydrotalcites as Potential Adsorbents..."

DO NOT REMOVE FROM FILE!

STAFF USE ONLY

Searcher: K. Fuller
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: _____
Date Completed: 10/7/02
Searcher Prep & Review Time: 30
Clerical Prep Time: _____
Online Time: 50

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) 2
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ✓
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

=> file reg
FILE 'REGISTRY' ENTERED AT 11:53:25 ON 07 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 6 OCT 2002 HIGHEST RN 459408-49-2
DICTIONARY FILE UPDATES: 6 OCT 2002 HIGHEST RN 459408-49-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 11:53:30 ON 07 OCT 2002
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FILE COVERS 1907 - 7 Oct 2002 VOL 137 ISS 15
FILE LAST UPDATED: 6 Oct 2002 (20021006/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que
L39 48706 SEA FILE=REGISTRY ABB=ON (FE(L)(MG OR CA OR CE OR LA))/ELS
L40 113250 SEA FILE=HCAPLUS ABB=ON L39
L41 155 SEA FILE=HCAPLUS ABB=ON L40 AND ?HYDROTALCITE?
L42 1 SEA FILE=HCAPLUS ABB=ON L41 AND HYPERPHOSPHATEMI?
L43 1 SEA FILE=HCAPLUS ABB=ON L41 AND ?PHOSPHATE?(3A)BIND?
L44 96 SEA FILE=HCAPLUS ABB=ON L40 AND ?PHOSPHATE?(3A)BIND?
L45 2 SEA FILE=HCAPLUS ABB=ON L40 AND HYPERPHOSPHATEMI?

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

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L47        842 SEA FILE=REGISTRY ABB=ON  (FE(L)(MG OR CA OR CE OR LA)(L)C(L)H(
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L51          3 SEA FILE=HCAPLUS ABB=ON  L49 AND THU/RL
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L54          1 SEA FILE=HCAPLUS ABB=ON  L49 AND HYPERPHOS?
L55         13 SEA FILE=HCAPLUS ABB=ON  L49(L)?TALCITE?
L56         31 SEA FILE=HCAPLUS ABB=ON  L42 OR L43 OR L45 OR L46 OR L50 OR
             L51 OR L53 OR L54 OR L55


=> d l56 all 1-31 hitstr

L56  ANSWER 1 OF 31  HCAPLUS  COPYRIGHT 2002 ACS
AN   2002:592349  HCAPLUS
DN   137:161333
TI   Non-magnetic one-component electrostatographic toner and method for
     toner-image formation using apparatus having process cartridge
IN   Kawakami, Hiroaki; Handa, Satoshi; Moriki, Yuji; Suzuki, Kiyokazu
PA   Canon Inc., Japan
SO   Jpn. Kokai Tokkyo Koho, 17 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
IC   ICM  G03G009-08
     ICS  G03G015-08
CC   74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   JP 2002221818      A2   20020809       JP 2001-15518    20010124
AB   The title toner is for a development unit having a latent image support, a
     toner support for a tone contg. a binder resin, a colorant, and
     hydrotalcite, a toner-thickness controller, an elastic roller , and a
     toner-charging roller, wherein the toner-charging roller has 0.12-2.00 mm
     nip with the toner support and has the surface of 0.05-0.7 Ra/Rz ratio and
     wherein the hydrotalcite has compn. M12+y1M22+y2...Mj2+yjL13+x1jL23+x2...L
     k3+xk...jLk3+xk(OH)2.cntdot.(x/n)An-.cntdot.mH2O (0<[X
     =(x1+x2+...+xk)].ltoreq.0.5; Y = y1+y2+...+yj=1-X; j-k = .gtoreq.2
     integer; M12+,y1M22+y2,...Mj2+yj = 2-valent metal ion;
     L13+x1,L23+x2,...Lk3+ = 3-valent metal ion; An- = n-valent anion;
     m.gtoreq.0). The toner generates little white spot on an image filling
     all printable area of recording paper under low temp. environment.
ST   magnetic component electrostatog toner image app process cartridge
IT   Electrographic toners
     Electrography
     Electrophotographic toners
     Electrophotography
        (non-magnetic one-component electrostatog. toner)
IT   445485-35-8 445485-38-1 445485-41-6
     445485-44-9   445485-48-3 445485-51-8
     445485-54-1   445485-56-3 445485-59-6
     RL: TEM (Technical or engineered material use); USES (Uses)
        (hydrotalcite in toner)
IT   445485-35-8 445485-38-1 445485-41-6
     445485-44-9 445485-51-8 445485-54-1
     445485-59-6
```

RL: TEM (Technical or engineered material use); USES (Uses)
(**hydrotalcite** in toner)
RN 445485-35-8 HCAPLUS
CN Aluminum calcium gallium iron magnesium strontium zinc carbonate chloride hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 445485-34-7
CMF C O3 . Al . Ca . Cl . Fe . Ga . H O . Mg . Sr . Zn
CCI TIS

CM 2

CRN 22537-15-1
CMF Cl

Cl

CM 3

CRN 14280-30-9
CMF H O

OH^-

CM 4

CRN 7440-70-2
CMF Ca

Ca

CM 5

CRN 7440-66-6
CMF Zn

Zn

CM 6

CRN 7440-55-3
CMF Ga

Ga

CM 7

CRN 7440-24-6
CMF Sr

Sr

CM 8

CRN 7439-95-4
CMF Mg

Mg

CM 9

CRN 7439-89-6
CMF Fe

Fe

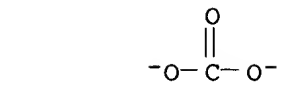
CM 10

CRN 7429-90-5
CMF Al

Al

CM 11

CRN 3812-32-6
CMF C O3



RN 445485-38-1 HCAPLUS
CN Aluminum iron magnesium strontium zinc carbonate chloride hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 445485-37-0

CMF C O3 . Al . Cl . Fe . H O . Mg . Sr . Zn
CCI TIS

CM 2

CRN 22537-15-1
CMF Cl

Cl

CM 3

CRN 14280-30-9
CMF H O

OH^-

CM 4

CRN 7440-66-6
CMF Zn

Zn

CM 5

CRN 7440-24-6
CMF Sr

Sr

CM 6

CRN 7439-95-4
CMF Mg

Mg

CM 7

CRN 7439-89-6
CMF Fe

Fe

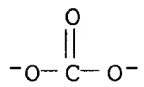
CM 8

CRN 7429-90-5
CMF Al

Al

CM 9

CRN 3812-32-6
CMF C O3



RN 445485-41-6 HCAPLUS
CN Aluminum calcium gallium iron magnesium zinc carbonate chloride hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 445485-40-5
CMF C O3 . Al . Ca . Cl . Fe . Ga . H O . Mg . Zn
CCI TIS

CM 2

CRN 22537-15-1
CMF Cl

Cl

CM 3

CRN 14280-30-9
CMF H O

OH^-

CM 4

CRN 7440-70-2
CMF Ca

Ca

CM 5

CRN 7440-66-6
CMF Zn

Zn

CM 6

CRN 7440-55-3
CMF Ga

Ga

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

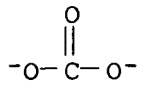
CM 9

CRN 7429-90-5
CMF Al

Al

CM 10

CRN 3812-32-6
CMF C O3



RN 445485-44-9 HCAPLUS
CN Aluminum copper iron magnesium nickel zinc carbonate chloride hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 445485-43-8
CMF C O3 . Al . Cl . Cu . Fe . H O . Mg . Ni . Zn
CCI TIS

CM 2

CRN 22537-15-1
CMF Cl

Cl

CM 3

CRN 14280-30-9
CMF H O

OH^-

CM 4

CRN 7440-66-6
CMF Zn

Zn

CM 5

CRN 7440-50-8
CMF Cu

Cu

CM 6

CRN 7440-02-0

CMF Ni

Ni

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

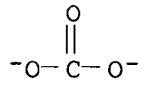
CM 9

CRN 7429-90-5
CMF Al

Al

CM 10

CRN 3812-32-6
CMF C O3



RN 445485-51-8 HCAPLUS
CN Aluminum barium calcium cobalt iron magnesium zinc carbonate hydroxide (Al0.29Ba0.01Ca0.01Co0.01Fe0.01Mg0.65Zn0.03(CO3)0.16(OH)2), hydrate (50:21) (9CI) (CA INDEX NAME)

CM 1

CRN 445485-50-7
CMF C O3 . Al . Ba . Ca . Co . Fe . H O . Mg . Zn
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7440-70-2
CMF Ca

Ca

CM 4

CRN 7440-66-6
CMF Zn

Zn

CM 5

CRN 7440-48-4
CMF Co

Co

CM 6

CRN 7440-39-3
CMF Ba

Ba

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

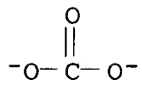
CM 9

CRN 7429-90-5
CMF Al

Al

CM 10

CRN 3812-32-6
CMF C O3



RN 445485-54-1 HCAPLUS
CN Aluminum boron iron magnesium zinc carbonate hydroxide (Al0.25B0.01Fe0.01Mg0.7Zn0.04(CO3)0.13(OH)2), hydrate (50:11) (9CI) (CA INDEX NAME)

CM 1

CRN 445485-53-0
CMF C O3 . Al . B . Fe . H O . Mg . Zn
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7440-66-6
CMF Zn

Zn

CM 4

CRN 7440-42-8
CMF B

B

CM 5

CRN 7439-95-4
CMF Mg

Mg

CM 6

CRN 7439-89-6
CMF Fe

Fe

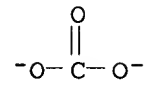
CM 7

CRN 7429-90-5
CMF Al

Al

CM 8

CRN 3812-32-6
CMF C O3



RN 445485-59-6 HCAPLUS
CN Aluminum gallium iron magnesium carbonate hydroxide (Al0.65Ga0.01Fe0.04Mg0.29(CO3)0.35(OH)2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 445485-58-5
CMF C O3 . Al . Fe . Ga . H O . Mg

CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7440-55-3
CMF Ga

Ga

CM 4

CRN 7439-95-4
CMF Mg

Mg

CM 5

CRN 7439-89-6
CMF Fe

Fe

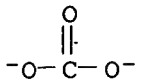
CM 6

CRN 7429-90-5
CMF Al

Al

CM 7

CRN 3812-32-6
CMF C O3



L56 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:592348 HCAPLUS
DN 137:161332
TI Electrostatographic toners containing hydrotalcite
IN Moriki, Yuji; Kawakami, Hiroaki; Handa, Satoshi; Suzuki, Kiyokazu
PA Canon Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 31 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G009-08
ICS G03G009-087; G03G015-20; H05B006-06; H05B006-14
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002221817	A2	20020809	JP 2001-15517	20010124

AB The title toner is used with a toner image-fixing unit having a means for generating magnetic field and a roller having a heating layer heated by electrocond. and contains a binder resin, a colorant, and fine powder of hydrotalcite, wherein the hydrotalcite has compn. M12+y1M22+y2...Mj2+yjL13+x1jL23+x2...Lk3+xk...jLk3+xk(OH)2.cntdot.(x/n)An-.cntdot.mH2O (0<[X =(x1+x2+...+xk)].ltoreq.0.5; Y = y1+y2+...+yj=1-X; j-k = .gtoreq.2 integer; M12+,y1M22+y2,...Mj2+yj = 2-valent metal ion; L13+x1,L23+x2,...Lk3+ = 3-valent metal ion; An- = n-valent anion; m.gtoreq.0). The toner generates little white spot on an image filling all printable area of recording paper under low temp. environment.
ST electrostatog toner hydrotalcite
IT Electrophotographic toners
(electrostatog. toners contg. hydrotalcite)
IT **445484-12-8** 445484-15-1 445484-18-4 **445484-20-8**
445484-22-0 445484-27-5 445484-29-7 445484-30-0
RL: TEM (Technical or engineered material use); USES (Uses)
(**hydrotalcite** in electrophotog. toners)
IT **445484-12-8 445484-20-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(**hydrotalcite** in electrophotog. toners)
RN 445484-12-8 HCAPLUS
CN Aluminum iron magnesium zinc carbonate hydroxide (Al0.29Fe0.01Mg0.66Zn0.02(CO3)0.15(OH)2), hydrate (20:9) (9CI) (CA INDEX NAME)

CM 1

CRN 445484-11-7
CMF C O3 . Al . Fe . H O . Mg . Zn
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH-

CM 3

CRN 7440-66-6
CMF Zn

Zn

CM 4

CRN 7439-95-4
CMF Mg

Mg

CM 5

CRN 7439-89-6
CMF Fe

Fe

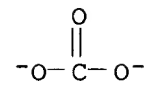
CM 6

CRN 7429-90-5
CMF Al

Al

CM 7

CRN 3812-32-6
CMF C O3



RN 445484-20-8 HCAPLUS
CN Aluminum calcium copper iron magnesium nickel carbonate hydroxide (Al0.31Ca0.09Cu0.02Fe0.02Mg0.54Ni0.02(CO3)0.16(OH)2), hydrate (20:9) (9CI)

(CA INDEX NAME)

CM 1

CRN 445484-19-5
CMF C O3 . Al . Ca . Cu . Fe . H O . Mg . Ni
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7440-70-2
CMF Ca

Ca

CM 4

CRN 7440-50-8
CMF Cu

Cu

CM 5

CRN 7440-02-0
CMF Ni

Ni

CM 6

CRN 7439-95-4
CMF Mg

Mg

CM 7

CRN 7439-89-6
CMF Fe

Fe

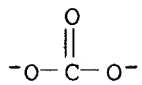
CM 8

CRN 7429-90-5
CMF Al

Al

CM 9

CRN 3812-32-6
CMF C O3



L56 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:67817 HCAPLUS
DN 137:206428
TI Different Mg to Fe ratios in the mixed metal MgFe hydroxy-carbonate compounds and the effect on **phosphate binding** compared with established **phosphate binders**
AU Zhu, H.; Webb, M.; Buckley, J.; Roberts, N. B.
CS Department of Clinical Chemistry, Royal Liverpool University Hospital, Liverpool, L7 8XP, UK
SO Journal of Pharmaceutical Sciences (2002), 91(1), 53-66
CODEN: JPMSAE; ISSN: 0022-3549
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 63-7 (**Pharmaceuticals**)
AB Due to the side effects of the current oral **phosphate binders**, there is a need for effective alternatives. A no. of mixed metal hydroxy-carbonate compds. (MMHCs) based on Mg and Fe have recently been established as effective **phosphate binders**. The authors have now carried out further studies on the MMHCs with different ratios of Mg2+:Fe3+ in different forms to assess for **phosphate binding** efficacy and ionic release in aq. soln. and food slurries. The compds. that provide the most promise are those with Mg2+:Fe3+ ratios of 2:1 and 4:1 in the unaged/dry form. Their **phosphate binding** efficacy was compared with a wide range of established **phosphate binders**, such as aluminum hydroxide [Al(OH)3], calcium carbonate (CaCO3), calcium acetate (CaAc2), magnesium hydroxide [Mg(OH)2], and lanthanum carbonate [La2(CO3)3] in various food slurries. The results showed that the MgFe compds. were much more effective (on a wt. for wt. basis) than the

applicant

established binders, and their properties were relatively pH independent. Calcium compds. (CaCO3 and CaAc2) were ineffective under the exptl. conditions. Mg(OH)2 was effective at low pH but not at pHs greater than 5.0, and also released two- to threefold more magnesium than the MgFe compds. Al(OH)3 showed some degree of efficacy, but the binding capacity was, at best, less than 50% of the MMHCs. La2(CO3)3 required at least a 10-fold increase in wt. to give comparable binding to the MMHCs. In conclusion, MgFe hydroxy-carbonate compds. are effective **phosphate binders** and may provide a better alternative to both existing and emerging **binders** for combating **hyperphosphatemia**.

ST magnesium iron hydroxy carbonate **phosphate binder**

IT Kidney, disease
(failure; different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

IT Dialysis
(hemodialysis; different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

IT 7439-95-4, Magnesium, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

IT 62-54-4, Calcium acetate 471-34-1, Calcium carbonate, biological studies 587-26-8, Lanthanum carbonate 1309-42-8, Magnesium hydroxide 14265-44-2, Phosphate, biological studies 21645-51-2, Aluminum hydroxide, biological studies
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

IT **98714-05-7P** 452899-48-8P, Aluminum iron carbonate hydroxide
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Alfrey, A; N Eng J Med 1976, V294, P184 MEDLINE
(2) Arora, K; Arch Inter Med 1975, V135, P603 MEDLINE
(3) Berlyne, G; Lancet 1970, V2, P494 HCAPLUS
(4) Carlino, S; Chem Br 1997, V33, P59 HCAPLUS
(5) Coburn, J; The Kidney, 4th ed 1992, P2036
(6) Cunningham, J; Nephrol Dial Transplant 1992, V7, P63 MEDLINE
(7) Davenport, A; Nephrol Dial Transplant 1992, V7, P632 MEDLINE
(8) Davenport, A; Nephron 1989, V52, P235
(9) Delmez, J; Am J Kidney Dis 1992, V4, P303
(10) Felsenfeld, A; Am J Nephrol 1982, V2, P147 MEDLINE
(11) Fournier, A; Kidney Int 1986, V29, PS114
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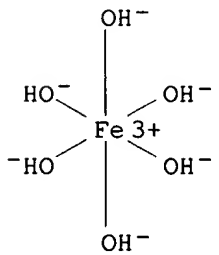
IT **98714-05-7P**
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(different Mg to Fe ratios in mixed metal MgFe hydroxy-carbonate compds. and effect on **phosphate binding** compared with established **phosphate binders**)

RN 98714-05-7 HCAPLUS

CN Ferrate (Fe(OH)63-), magnesium carbonate hydroxide (2:6:1:4) (9CI) (CA INDEX NAME)

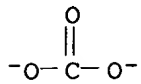
CM 1

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 2

CRN 3812-32-6
CMF C O3



L56 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:722895 HCAPLUS
DN 133:352146
TI Calcination and rehydration behavior of Mg-Fe-CO3 hydrotalcite-like compounds
AU Hibino, T.; Tsunashima, A.
CS Materials Processing Department, National Institute for Resources and Environment, Tsukuba, 305-8569, Japan
SO Journal of Materials Science Letters (2000), 19(16), 1403-1405
CODEN: JMSLD5; ISSN: 0261-8028
PB Kluwer Academic Publishers
DT Journal
LA English
CC 49-5 (Industrial Inorganic Chemicals)
Section cross-reference(s): 67
AB Spinel was frequently detected as a second phase during repetitive calcination and rehydration of Mg-Fe-CO3 hydrotalcite-like compds. The calcined Mg-Fe-CO3 hydrotalcite-like compds. were reconstructed to the original Mg-Fe-CO3 hydrotalcite structure even by rehydration at room temp., but it was difficult to prevent MgFe2O4 formation. The amt. of MgFe2O4 spinel increased with repetitions of the calcination and rehydration cycle. A low calcination temp. and low iron content in the initial Mg-Fe-CO3 hydrotalcite minimized MgFe2O4 spinel formation. These results on the calcination and rehydration properties of Mg-Fe-CO3 hydrotalcite-like compds. will be helpful for choosing conditions for intercalation by reconstruction and catalyst prepn.
ST magnesium iron carbonate hydrotalcite like compd calcination rehydration
IT Hydration, chemical
(calcination and rehydration behavior of Mg-Fe-CO3 hydrotalcite-like compds.)
IT Minerals, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(hydrotalcite-group; calcination and rehydration behavior of Mg-Fe-CO3 hydrotalcite-like compds.)
IT 12068-51-8, Aluminum magnesium oxide al2mgo4
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(calcination and rehydration behavior of Mg-Fe-CO3 hydrotalcite-like compds.)
IT 497-19-8, Sodium carbonate, reactions 10377-60-3, Magnesium nitrate 10421-48-4, Ferric nitrate **145424-09-5**, Iron magnesium carbonate hydroxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(calcination and rehydration behavior of Mg-Fe-CO3 **hydrotalcite**-like compds.)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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IT **145424-09-5**, Iron magnesium carbonate hydroxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(calcination and rehydration behavior of Mg-Fe-CO3 **hydrotalcite** -like compds.)
RN 145424-09-5 HCAPLUS
CN Iron magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Fe	x	7439-89-6
CO3	x	3812-32-6

L56 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:240041 HCAPLUS
DN 132:353264
TI Thermal behaviour of hydroxides, hydroxysalts and hydrotalcites
AU Bera, Parthasarathi; Rajamathi, Michael; Hegde, M. S.; Kamath, P. Vishnu
CS Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore, 560 012, India
SO Bulletin of Materials Science (2000), 23(2), 141-145
CODEN: BUMSDW; ISSN: 0250-4707
PB Indian Academy of Sciences
DT Journal
LA English
CC 67-3 (Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms)
Section cross-reference(s): 69
AB Mass spectrometric anal. of gases evolved during thermal decompn. of divalent metal hydroxides, hydroxysalts and hydrotalcites show that all these compds. undergo dehydration in the temp. range 30 < T < 220.degree.C followed by decompn. at temps. above 250.degree.C. The latter step involves simultaneous deanation and dehydroxylation of the layers. Our observations conclusively prove that alternative mechanisms which envisage CO2 evolution due to deanation at lower temps. proposed by Kanezaki to be wrong.
ST hydroxide thermal decompn; hydroxy salt thermal decompn; hydrotalcite thermal decompn
IT Thermal decomposition
(thermal behavior of hydroxides, hydroxysalts and hydrotalcites)
IT 12027-16-6, Nickel hydroxide nitrate (Ni3(OH)4(NO3)2) 12054-48-7, Nickel hydroxide 150477-36-4 154769-43-4 162732-60-7 162732-61-8 180257-97-0 268724-02-3, Cobalt hydroxide nitrate (Co3(OH)4(NO3)2) **268724-03-4** 268724-05-6 268724-06-7
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(thermal behavior of hydroxides, hydroxysalts and **hydrotalcites**)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
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IT **268724-03-4**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(thermal behavior of hydroxides, hydroxysalts and **hydrotalcites**)

RN 268724-03-4 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.25Mg0.75(CO3)0.12(OH)2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 207927-51-3
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

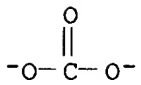
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



L56 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:23940 HCAPLUS
DN 132:228002
TI Basic Properties of the Mixed Oxides Obtained by Thermal Decomposition of Hydrotalcites Containing Different Metallic Compositions
AU Valente, J. Sanchez; Figueras, F.; Gravelle, M.; Kumbhar, P.; Lopez, J.; Besse, J.-P.
CS Institut de Recherches sur la Catalyse, Villeurbanne, 69626, Fr.
SO Journal of Catalysis (2000), 189(2), 370-381
CODEN: JCTLA5; ISSN: 0021-9517
PB Academic Press
DT Journal
LA English
CC 67-1 (Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms)
Section cross-reference(s): 66
AB Carbonated layered double hydroxides (LDHs) contg. Al, Fe, or Cr in a Mg(OH)2 matrix or Al dissolved in hydroxides of Mg, Cu, Ni, Co, or Zn are used as precursors of basic catalysts. Decarbonation is studied by thermal anal. The av. basic strength, evaluated by the decarbonation temp., is related to the partial charge of oxygen in the LDHs obtained from the Sanderson theory of electronegativity. The enthalpy of adsorption of CO2 on the resulting mixed oxides is measured by calorimetry. A homogeneous surface is generally obsd. for CO2 adsorption, with initial heats of adsorption close to those reported for MgO. The no. of sites detd. by this method is proportional to the rate consts. for .beta.-isophorone isomerization, suggesting that both techniques measure surface properties. The layered structure in which OH- is the compensating anion can be re-formed by hydration. This process does not appreciably change the adsorption of CO2; thus, oxygens and hydroxyls show similar basic strengths in this case. (c) 2000 Academic Press.
ST mixed oxide catalyst prepn thermal decompn hydrotalcite; carbon dioxide enthalpy adsorption oxide catalyst basicity; isophorone isomerization kinetics oxide catalyst basicity
IT Catalysts
Surface basicity
Thermal decomposition
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites contg. different metallic compns.)
IT Oxides (inorganic), uses

RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites contg. different metallic compns.)

IT Adsorption enthalpy
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites in relation to adsorption enthalpy of carbon dioxide)

IT Isomerization kinetics
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites in relation to isomerization kinetics of .beta.-isophorone)

IT Pore size
Surface area
(of mixed oxides obtained by thermal decompn. of hydrotalcites contg. different metallic compns.)

IT 154769-43-4 261375-87-5 261375-89-7 261375-91-1 261375-93-3
261375-95-5 **261375-96-6 261375-98-8**
261376-00-5 261376-02-7 261376-03-8 261376-05-0
261376-07-2 261376-08-3 261376-10-7 261376-12-9 261376-14-1
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(basic properties of mixed oxide obtained by thermal decompn. of **hydrotalcites**)

IT 124-38-9, Carbon dioxide, uses
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites in relation to adsorption enthalpy of)

IT 471-01-2, .beta.-Isophorone
RL: NUU (Other use, unclassified); PRP (Properties); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(basic properties of mixed oxides obtained by thermal decompn. of hydrotalcites in relation to isomerization kinetics of)

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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IT **261375-96-6 261375-98-8 261376-00-5 261376-02-7**
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(basic properties of mixed oxide obtained by thermal decompn. of **hydrotalcites**)

RN 261375-96-6 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.33Mg0.67(CO3)0.16(OH)2), hydrate (5:4) (9CI) (CA INDEX NAME)

CM 1

CRN 137926-29-5
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

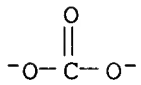
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



RN 261375-98-8 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.38Mg0.62(CO3)0.16(OH)2), hydrate (25:21) (9CI) (CA INDEX NAME)

CM 1

CRN 261375-97-7
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

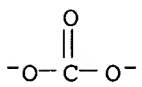
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



RN 261376-00-5 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.36Mg0.64(CO3)0.14(OH)2), hydrate (5:4) (9CI) (CA INDEX NAME)

CM 1

CRN 261375-99-9
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

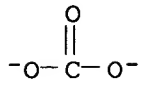
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



RN 261376-02-7 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.31Mg0.69(CO3)0.16(OH)2), hydrate (5:4) (9CI) (CA INDEX NAME)

CM 1

CRN 261376-01-6
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

CM 3

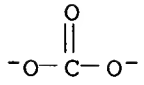
CRN 7439-95-4
CMF Mg

CM 4

CRN 7439-89-6
CMF Fe

CM 5

CRN 3812-32-6
CMF C O3



L56 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2002 ACS

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

AN 1999:312806 HCAPLUS
DN 130:353445
TI Vacuum thermal insulators containing carbon dioxide adsorbents prepared from dawsonite or hydrotalcite, and manufacture and uses of the insulators
IN Takushima, Tsukasa; Takimoto, Yasuaki; Tenra, Tomohisa; Miyaji, Noriyuki
PA Matsushita Refrigeration Co., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08J009-02
ICS B32B027-40; E04B001-78; F16L059-06; F25D023-06
CC 38-3 (Plastics Fabrication and Uses)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11130888	A2	19990518	JP 1997-300161	19971031

AB Title thermal insulators, useful for refrigerators, buildings, etc., comprise a gas-barrier jacket, polyurethane powders as a core material, and CO2 gas adsorbents. The adsorbents are prepd. by preheating dawsonite or hydrotalcite at .gtoreq.250.degree. to form holes in crystal lattices by removal of CO3 ion and crystn. water for improvement of CO2 adsorption capacity. The insulators are manufd. by dehydrating mixts. of urethane powders and the adsorbents at 120-250.degree.. The insulators are useful for vacuum insulation. Also claimed are thermal insulator panels or boxes equipped with the vacuum insulators. Thus, NaAl(CO3)(OH)2 was mixed with rigid polyurethane foam powders (av. diam. .apprx.300 .mu.m), packed in a nonwoven fabric bag, dehydrated at 160.degree., and inserted into a jacket, which was heat-sealed to form a vacuum insulator.
ST dawsonite adsorbent polyurethane foam vacuum insulator; hydrotalcite adsorbent polyurethane foam thermal insulator; dewatering dawsonite adsorbent polyurethane foam refrigerator; building insulator panel polyurethane foam manuf; carbon dioxide adsorbent polyurethane thermal insulator
IT Porous materials
Porous materials
(adsorbents; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Thermal insulators
(boards; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Drying
(dewatering; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Laminated plastic films
(jacket; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Metals, uses
Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(jacket; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Construction materials
Refrigerating apparatus
Thermal insulators
(manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Plastic foams
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

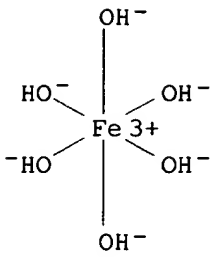
(manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Thermal insulators
(panels; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Adsorbents
Adsorbents
(porous; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(rigid, cellular; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT 12011-76-6, Dawsonite **12211-53-9**, Sjogrenite 12304-65-3, Hydrotalcite
RL: MOA (Modifier or additive use); USES (Uses)
(adsorbent; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or **hydrotalcite**)
IT 13397-24-5, Gypsum, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(board; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT 9002-88-4, Polyethylene
RL: TEM (Technical or engineered material use); USES (Uses)
(high-d., jacket; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT 7429-90-5, Aluminum, uses 25038-59-9, Poly(ethylene terephthalate), uses 25067-34-9, Ethylene-vinyl alcohol copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(jacket; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT 124-38-9, Carbonic acid gas, processes 7732-18-5, Water, processes
RL: REM (Removal or disposal); PROC (Process)
(manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or hydrotalcite)
IT **12211-53-9**, Sjogrenite
RL: MOA (Modifier or additive use); USES (Uses)
(adsorbent; manuf. of vacuum insulators contg. porous CO2 adsorbents prepd. from dawsonite or **hydrotalcite**)
RN 12211-53-9 HCAPLUS
CN Sjogrenite (Mg6(CO3)[Fe(OH)6]2(OH)4.4H2O) (9CI) (CA INDEX NAME)

CM 1

CRN 98714-05-7
CMF C O3 . 2 Fe H6 O6 . 4 H O . 6 Mg

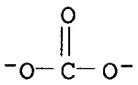
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3



L56 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:231519 HCAPLUS
DN 130:272057
TI Metal compounds, mixed or sulfated, as **phosphate binders**
IN Roberts, Norman Bryson; Webb, Maurice; Rankin, Benjamin Joseph
PA Crosfield Limited, UK
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K033-26
ICS A61K033-06; A61K033-24
CC 63-7 (**Pharmaceuticals**)
Section cross-reference(s): **1**, 14

applicant

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9915189	A1	19990401	WO 1998-GB2834	19980918
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2303820	AA	19990401	CA 1998-2303820	19980918
	AU 9891733	A1	19990412	AU 1998-91733	19980918
	EP 1015002	A1	20000705	EP 1998-944055	19980918
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9812223	A	20000718	BR 1998-12223	19980918
	JP 2001517633	T2	20011009	JP 2000-512558	19980918
PRAI	GB 1997-20061	A	19970919		
	WO 1998-GB2834	W	19980918		

AB A mixed metal compd. for pharmaceutical use is free from aluminum and has a **phosphate binding** capacity of at least 30 %, by wt. of the total wt. of phosphate present, over a pH range of from 2-8. The compd. is esp. useful for treatment of **hyperphosphatemia**. The metals are preferably iron (III) and at least one of calcium, magnesium, lanthanum and cerium. A metal sulfate for pharmaceutical use is selected from at least one of calcium, lanthanum and cerium sulfate compds. and has a **phosphate binding** capacity of at least 30 % by wt. of the total phosphate present, over a pH range from 2-8.

ST metal compd **phosphate binder hyperphosphatemia**

IT Phosphates, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**hyperphosphatemia**; metal compds., mixed or sulfated, as **phosphate binders** for treatment of **hyperphosphatemia**)

IT 471-34-1, Calcium carbonate (CaCO3), biological studies 1309-42-8, Magnesium hydroxide (Mg(OH)2) 7778-18-9D, Calcium sulfate, sodium hydroxide-treated 10028-22-5D, Ferric sulfate, sodium hydroxide-treated 12304-65-3, **Hydrotalcite** (Mg6(CO3)[Al(OH)6]2(OH)4.4H2O) 15785-09-8, Cerium hydroxide (Ce(OH)3) 21645-51-2, Aluminum hydroxide (Al(OH)3), biological studies **94972-70-0 222303-14-2 222303-16-4 222303-18-6 222303-19-7 222303-22-2 222303-23-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal compds., mixed or sulfated, as **phosphate binders** for treatment of **hyperphosphatemia**)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Algina Ag; DE 3402878 A 1985 HCAPLUS
(2) Asahi Chem Ind Co Ltd; JP 62145024 A 1987 HCAPLUS
(3) Asahi Chem Ind Co Ltd; JP 62145024 A 1987 HCAPLUS
(4) Budavari; The Merck Index 1996, P917
(5) Chugai Pharmaceut Co Ltd; JP 61036222 A 1986 HCAPLUS
(6) Fisons Plc; GB 2254556 A 1992 HCAPLUS
(7) Jackson, S; US 5654011 A 1997 HCAPLUS
(8) Johnson Matthey Plc; WO 9630029 A 1996 HCAPLUS
(9) Khark House Build; IN 414849 A 1977
(10) Otsuka Pharmaceut Factory Inc; JP 05155776 A 1993 HCAPLUS
(11) Otsuka Seiyaku Kogyo Kk; JP 05155776 A 1993 HCAPLUS
(12) Vifor Int Ag; WO 9722266 A 1997 HCAPLUS
(13) Wurzburger, S; US 5571336 A 1996 HCAPLUS

IT **94972-70-0 222303-14-2 222303-16-4 222303-18-6 222303-19-7 222303-22-2 222303-23-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal compds., mixed or sulfated, as **phosphate binders** for treatment of **hyperphosphatemia**)

RN 94972-70-0 HCAPLUS

CN Iron, compd. with magnesium (1:2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Mg	2	7439-95-4

Fe	1	7439-89-6

RN 222303-14-2 HCAPLUS
CN Calcium, compd. with iron (1:1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Ca	1	7440-70-2
Fe	1	7439-89-6

RN 222303-16-4 HCAPLUS
CN Calcium, compd. with iron (2:1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Ca	2	7440-70-2
Fe	1	7439-89-6

RN 222303-18-6 HCAPLUS
CN Calcium, compd. with iron (5:1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Ca	5	7440-70-2
Fe	1	7439-89-6

RN 222303-19-7 HCAPLUS
CN Iron, compd. with magnesium (1:3) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Mg	3	7439-95-4
Fe	1	7439-89-6

RN 222303-22-2 HCAPLUS
CN Calcium, compd. with iron (3:1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Ca	3	7440-70-2
Fe	1	7439-89-6

RN 222303-23-3 HCAPLUS
CN Calcium, compd. with iron and magnesium (3:2:3) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
Ca	3	7440-70-2
Mg	3	7439-95-4
Fe	2	7439-89-6

L56 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:507626 HCAPLUS

DN 129:210878
TI Synthesis and characterization of .beta.-diketone isonicotinoylhydrazone-rare earth complexes and their elimination effect on biological free radicals
AU Jing, H. W.; Chen, B. H.; Zeng, Zh. Zh.; Huo, W. M.
CS Department of Chemistry, Lanzhou University, Lanzhou, 730 000, Peop. Rep. China
SO Chemical Papers (1998), 52(3), 163-166
CODEN: CHPAEG; ISSN: 0366-6352
PB Slovak Academic Press Ltd.
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 1, 67
AB Six new complexes, RE(C16H15N3O2)3 and RE(C20H19N3O2Fe)3 (RE = La, Sm, Y) were synthesized and characterized by elemental analyses, IR and 1H NMR spectra. These .beta.-diketones are tridentate ligands to the lanthanide ion. The coordination no. of the central RE ion is nine and the authors suggest a tricapped trigonal structure for these complexes. The inhibition rates of the complexes and the ligands to biol. free radicals (O2-.bul. and OH.bul.) were detd.
ST rare earth diketone isonicotinoylhydrazone prepn scavenger; radical inhibition rare earth diketone isonicotinoylhydrazone; hydrazone rare earth prepn radical scavenger; superoxide inhibition rare earth diketone isonicotinoylhydrazone; hydroxyl inhibition rare earth diketone isonicotinoylhydrazone
IT Rare earth complexes
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(hydrazone; prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)
IT IR spectra
Radical scavengers
(prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)
IT Reaction kinetics
(radical scavenging; prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)
IT Hydrazones
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(rare earth complexes; prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)
IT 29902-35-0P 138730-01-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(for prepn. of rare earth .beta.-diketone isonicotinoylhydrazonato complexes as inhibitors of biol. free radicals, superoxide and hydroxyl)
IT 54-85-3, Isonicotinoyl hydrazide 93-91-4, Benzoylacetone 12302-11-3, Ferrocenoylacetone
RL: RCT (Reactant); RACT (Reactant or reagent)
(for prepn. of rare earth .beta.-diketone isonicotinoylhydrazonato complexes as inhibitors of biol. free radicals, superoxide and hydroxyl)
IT 3352-57-6, Hydroxyl, reactions 11062-77-4, Superoxide

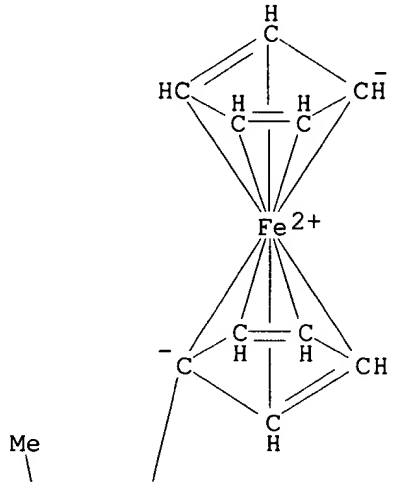
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)

IT 212123-34-7P 212123-37-0P 212123-40-5P **212123-46-1P**
212123-53-0P 212123-58-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)

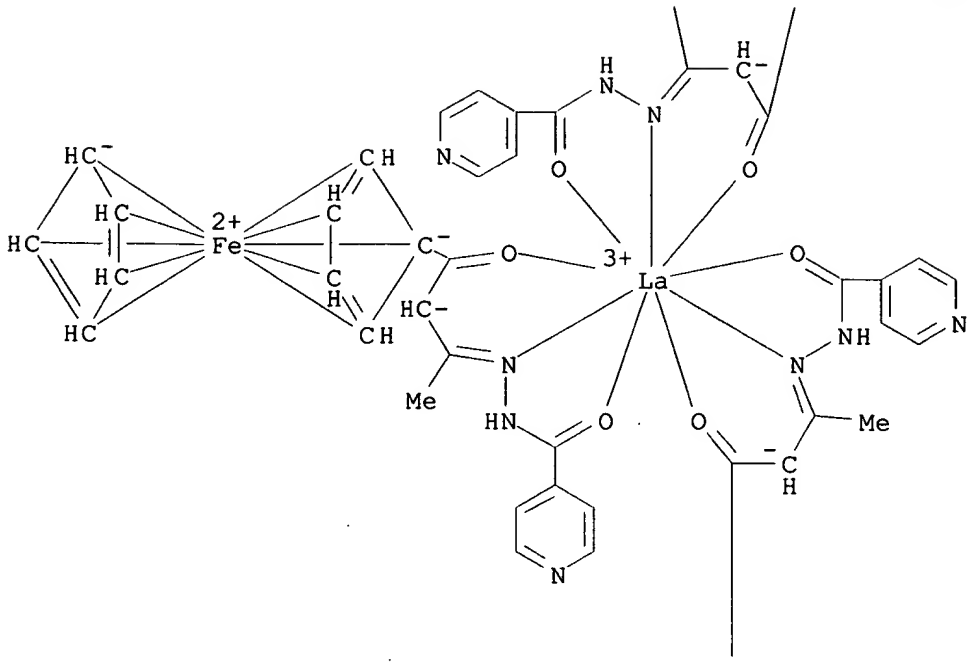
IT **212123-46-1P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., IR spectra and inhibition rates of rare earth .beta.-diketone isonicotinoylhydrazonato complexes towards biol. free radicals, superoxide and hydroxyl)

RN 212123-46-1 HCAPLUS
CN Lanthanum, tris[[1-(oxo-.kappa.O)-3-[(4-pyridinylcarbonyl-.kappa.O)hydrazono-.kappa.N1]butyl]ferrocenato]- (9CI) (CA INDEX NAME)

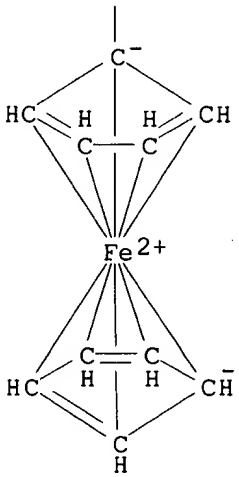
PAGE 1-A



PAGE 2-A



PAGE 3-A



L56 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:239531 HCAPLUS
DN 129:8624
TI Compositions containing layered mixed hydroxides for masking unpleasant taste of drugs
IN Narita, Eiichi; Tsushima, Yuki
PA Eisai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K047-00
CC 63-6 (**Pharmaceuticals**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10101580	A2	19980421	JP 1996-256363	19960927

AB Title compns. contain drugs having unpleasant taste and a layered compd. [M2+1-xM3+x(OH)2]x+[An-x/n.yH2O]x- (M2+ = Mg2+, Zn2+, Ni2+; M3+ = Al3+, Fe3+, Cr3+, Co3+; An- = Cl-, SO42-, CO32-, NO3-; 0 < x .ltoreq. 0.33; y >0; n .gtoreq.1) for taste masking. A compn. contg. 43.1% ticlopidine-HCl and a fired layered hydroxide [Mg0.75Al0.25(OH)2]+0.25[(CO3)0.125]-0.25.0.69H2O did not show unpleasant taste.
ST layered mixed hydroxide pharmaceutical taste masking; ticlopidine taste masking aluminum magnesium hydroxide
IT Gastrointestinal motility
(improvers for; layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
IT Antidepressants
Hypolipemic agents
Platelet aggregation inhibitors
(layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
IT Drug delivery systems
(oral; layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
IT **145424-09-5**, Iron magnesium carbonate hydroxide
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydrate; layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
IT 125-69-9, Dextromethorphan hydrobromide 10347-81-6, Maprotiline hydrochloride 34140-59-5, Trimebutine maleate 53885-35-1, Ticlopidine hydrochloride 154769-43-4
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
IT **145424-09-5**, Iron magnesium carbonate hydroxide
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydrate; layered mixed carbonate hydroxides for masking of unpleasant taste of pharmaceuticals)
RN 145424-09-5 HCAPLUS
CN Iron magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Fe	x	7439-89-6
CO3	x	3812-32-6

L56 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:236746 HCAPLUS
DN 129:596

TI Aluminum-free inorganic antacids
IN Narita, Eiichi; Tsushima, Yuki
PA Eisai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K033-26
ICS A61K033-26
CC 1-9 (**Pharmacology**)
Section cross-reference(s): **63**
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10101569	A2	19980421	JP 1996-260686	19961001

AB The antacids contain layered mixed hydroxides [Mg2+1-xFe3+x(OH)2]x+[CO32-x/n.yH2O]x- (0 < x .ltoreq. 0.33; y >0; n .gtoreq.1) . A layered compd. [Mg0.75Fe0.25(OH)2]+0.25[(CO3)0.125]-0.25.0.58H2O, prepd. from Na2CO3, MgCl2, FeCl3, and NaOH, exhibited a neutralizing effect against 0.1 M HCl comparable to that of NaHCO3.
ST iron magnesium hydroxide antacid aluminum free
IT Antacids
Drug delivery systems
(layered Fe Mg carbonate hydroxides as Al-free antacids)
IT **207449-28-3P 207449-29-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(layered Fe Mg carbonate hydroxides as Al-free antacids)
IT **207449-28-3P 207449-29-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(layered Fe Mg carbonate hydroxides as Al-free antacids)
RN 207449-28-3 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.25Mg0.75(CO3)0.12(OH)2), hydrate (50:29) (9CI) (CA INDEX NAME)

CM 1

CRN 207927-51-3
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

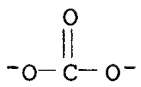
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



RN 207449-29-4 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.18Mg0.82(CO3)0.09(OH)2), hydrate (25:14) (9CI) (CA INDEX NAME)

CM 1

CRN 207927-52-4
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

CM 4

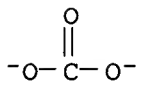
CRN 7439-89-6

CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



L56 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:622673 HCAPLUS
DN 127:331025
TI Effect of substitution of Fe3+/Cr3+ on the alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite
AU Velu, S.; Swamy, C. S.
CS Department of Chemistry, Indian Institute of Technology, Madras-600 036, India
SO Applied Catalysis, A: General (1997), 162(1-2), 81-91
CODEN: ACAGE4; ISSN: 0926-860X
PB Elsevier
DT Journal
LA English
CC 22-4 (Physical Organic Chemistry)
Section cross-reference(s): 67
AB Hydrotalcite (HT)-like compds. with the general formula, Mg0.8M(III)0.2(OH)2(CO3)0.1.cntdot.yH2O with M(III) = Al, Fe and Cr (Mg/Al at. ratio 4) were synthesized by copptn. method using a mixt. of NaOH/Na2CO3 as precipitant. The Powder X-ray diffraction (PXRD) of aluminum and iron contg. samples (M(III) = Al, Fe) showed single phase corresponding to HT when a mixt. of HT and MgCrO4.cntdot.7H2O phase was detected for chromium contg. sample (M(III) = Cr). These samples after calcination at 450.degree.C/8h/air, were used as catalyst for vapor phase alkylation of phenol with methanol. MgAl 4.0-CHT showed nearly 100% phenol conversion around 400.degree.C and the reaction was found to proceed predominantly through the formation of anisole (O-alkylation). Isomorphous substitution of Al3+ by Fe3+ or Cr3+ in the HT framework resulted in a decrease in phenol conversion in the order MgAl 4.0-CHT>MgCr4.0-CHT>MgFe 4.0-CHT and the alkylation reaction was found to proceed exclusively at C-centers (C-alkylation) to give o-cresol as a major product. The catalytic performance for the methylation of phenol has been correlated with acid-base properties of the catalysts as detd. by test reactions such as decompn. of 2-methyl-3-butyne-2-ol (MBOH) and cyclohexanol.
ST ferric substitution magnesium aluminum calcined hydrotalcite; alkylation catalyst phenol methanol; chromic substitution magnesium aluminum calcined hydrotalcite
IT Linear free energy relationship
(acid-base catalysis; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)
IT Catalysis

(acid-base; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT Adsorption
Alkylation
Alkylation catalysts
Chemoselectivity
Decomposition catalysts
Methylation
Methylation catalysts
Pore size
Powder x-ray diffractometry
Regiochemistry
Surface area
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT Crystal structure types
(hydrotalcite; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT Hydroxides (inorganic)
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(layered double; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 497-19-8, Sodium carbonate, reactions 1310-73-2, Sodium hydroxide, reactions
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(coprecipitant; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 108-93-0, Cyclohexanol, reactions 598-23-2, 2-Methyl-3-butyne
RL: RCT (Reactant); RACT (Reactant or reagent)
(decompn. catalyst test reaction; effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 576-26-1P, 2,6-Xylenol
RL: BYP (Byproduct); PREP (Preparation)
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 1309-48-4, Magnesia, properties 13423-61-5D, Magnesium chromate, heptahydrate
RL: CAT (Catalyst use); FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative); USES (Uses)
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 136724-41-9P, Aluminum magnesium carbide hydride oxide (Al0.2Mg0.8C0.1H2O2.3) **198023-14-2P**, Iron magnesium carbonate hydroxide (Fe0.2Mg0.8(CO3)0.1(OH)2) 198023-40-4P, Chromium magnesium carbonate hydroxide (Cr0.2Mg0.8(CO3)0.1(OH)2)
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined **hydrotalcite**)

IT 67-56-1, Methanol, reactions 108-95-2, Phenol, reactions
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT 95-48-7P, o-Cresol, preparation 100-66-3P, Anisole, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)

(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined hydrotalcite)

IT **198023-14-2P**, Iron magnesium carbonate hydroxide (Fe0.2Mg0.8(CO3)0.1(OH)2)
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(effect of substitution of Fe3+/Cr3+ on alkylation of phenol with methanol over magnesium-aluminum calcined **hydrotalcite**)

RN 198023-14-2 HCAPLUS

CN Iron magnesium carbonate hydroxide (Fe0.2Mg0.8(CO3)0.1(OH)2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	2	14280-30-9
Mg	0.8	7439-95-4
Fe	0.2	7439-89-6
CO3	0.1	3812-32-6

L56 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:129763 HCAPLUS

DN 124:290101

TI Selective formation of 2-hydroxy-3,3-bis(hydroxymethyl)-.gamma.-butyrolactone from formaldehyde on hydrotalcite-type catalysts

AU Mizutani, Tadashi; Miki, Yasushi; Nakashima, Ruka; Fujita, Haruo; Ogoshi, Hisanobu

CS Faculty Engineering, Kyoto Univ., Kyoto, 606-01, Japan

SO Bulletin of the Chemical Society of Japan (1996), 69(2), 425-9
CODEN: BCSJA8; ISSN: 0009-2673

PB Nippon Kagakkai

DT Journal

LA English

CC 33-8 (Carbohydrates)
Section cross-reference(s): 22

AB As a model for prebiotic sugar formation under neutral to acidic conditions, reactions of formaldehyde over hydrotalcite-type catalysts were investigated. Heating an aq. soln. of formaldehyde at 140-200 .degree.C for 12 h over Ni-Fe hydrotalcite-type catalyst afforded 2-hydroxy-3,3-bis(hydroxymethyl)-.gamma.-butyrolactone selectively, a 5.8% yield based on gas-liq. chromatog. anal. The structure was identified by 1H and 13C NMR and 1H-13C HSQC, HMBC and 13C-13C 2D in adequate NMR expts.

ST hydrotalcite catalyst oligomerization formaldehyde; formaldehyde conversion hydroxybishydroxymethylbutyrolactone; hydroxybishydroxymethylbutyrolactone prepn mol structure

IT Polymerization catalysts
(oligomerization, hydrotalcite-type; selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on hydrotalcite-type catalysts)

IT Polymerization
(oligomerization, selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on hydrotalcite-type catalysts)

IT 11086-33-2P 11086-39-8P 11086-56-9P **11090-40-7P** 12363-58-5P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on **hydrotalcite**-type catalysts)

IT 100-21-0, 1,4-Benzenedicarboxylic acid, reactions 7784-27-2, Aluminum nitrate nonahydrate 10026-22-9, Cobalt nitrate hexahydrate 13446-18-9, Magnesium nitrate hexahydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on hydrotalcite-type catalysts)

IT 2972-19-2P 65997-85-5P 175892-51-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on hydrotalcite-type catalysts)

IT 12304-65-3P, Hydrotalcite (Mg6(CO3)[Al(OH)6]2(OH)4.4H2O) **12351-92-7P**, Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) 12363-59-6P, Reevesite (Fe2Ni6(CO3)(OH)16.4H2O) 12426-31-2P, Takovite (Al2Ni6(CO3)(OH)16.4H2O)
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(synthetic; selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on **hydrotalcite**-type catalysts)

IT **11090-40-7P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on **hydrotalcite**-type catalysts)

RN 11090-40-7 HCAPLUS

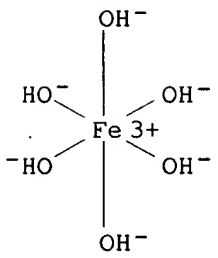
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium carbonate hydroxide (2:6:1:4), tetrahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 98714-05-7
CMF C O3 . 2 Fe H6 O6 . 4 H O . 6 Mg

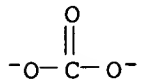
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3



IT **12351-92-7P**, Pyroaurite (Mg6[Fe2(CO3)O8].12H2O)
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(synthetic; selective formation of hydroxybis(hydroxymethyl)butyrolactone from formaldehyde on **hydrotalcite**-type catalysts)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:814762 HCAPLUS
DN 124:55779
TI Catalysis of transition metal-functionalized hydrotalcites for the Baeyer-Villiger oxidation of ketones in the presence of molecular oxygen and benzaldehyde
AU Kaneda, Kiyotomi; Ueno, Shinji; Imanaka, Toshinobu
CS Department of Chemical Engineering, Faculty of Engineering Science, Osaka University, Toyonaka, Osaka, 560, Japan
SO Journal of Molecular Catalysis A: Chemical (1995), 102(3), 135-8
CODEN: JMCCF2; ISSN: 1381-1169
PB Elsevier
DT Journal
LA English
CC 27-21 (Heterocyclic Compounds (One Hetero Atom))
OS CASREACT 124:55779
AB Multi-metallic hydrotalcites consisting of magnesium, aluminum, and iron, or copper elements were prepd., which catalyzed the Baeyer-Villiger oxidn. using a combination system of mol. oxygen and benzaldehyde. In particular, the Mg-Al-Fe-CO3 hydrotalcite efficiently oxidized various cyclic ketones to give high yields of the corresponding lactones, while in the case of the Mg-Al-Cu-CO3 hydrotalcite, bicyclic ketones were oxidized almost quant.
ST catalysis transition metal hydrotalcite Baeyer Villiger; ketone transition metal hydrotalcite Baeyer Villiger
IT Ketones, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(transition metal-functionalized hydrotalcites as Baeyer-Villiger oxidn. catalysts)
IT Oxidation catalysts
(Baeyer-Villiger, transition metal-functionalized hydrotalcites as Baeyer-Villiger oxidn. catalysts)
IT 11097-59-9P **171878-44-7P** 171878-45-8P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(transition metal-functionalized **hydrotalcites** as Baeyer-Villiger oxidn. catalysts)
IT 75-97-8, 3,3-Dimethyl-2-butanone 100-06-1 100-52-7, Benzaldehyde, reactions 108-94-1, Cyclohexanone, reactions 120-92-3, Cyclopentanone 497-38-1, Bicyclo[2.2.1]heptan-2-one 589-92-4, 4-Methylcyclohexanone 591-24-2, 3-Methylcyclohexanone 700-58-3, 2-Adamantanone 7782-44-7, Oxygen, reactions 10458-14-7, 5-Methyl-2-(1-methylethyl)cyclohexanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(transition metal-functionalized hydrotalcites as Baeyer-Villiger

oxidn. catalysts)
IT 499-54-7P, 7-(1-Methylethyl)-4-methyl-2-oxepanone 502-44-3P, 2-Oxepanone 540-88-5P, tert-Butyl acetate 542-28-9P, Tetrahydro-2-pyranone 1200-06-2P, 4-Methoxyphenyl acetate 2549-42-0P, 5-Methyl-2-oxepanone 2549-58-8P, 6-Methyl-2-oxepanone 2549-60-2P, 4-Methyl-2-oxepanone 5724-61-8P, 2-Oxabicyclo[3.2.1]octan-3-one 21898-84-0P, 4-Oxatricyclo[4.3.1.13,8]undecan-5-one
RL: SPN (Synthetic preparation); PREP (Preparation)
(transition metal-functionalized hydrotalcites as Baeyer-Villiger oxidn. catalysts)
IT **171878-44-7P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(transition metal-functionalized **hydrotalcites** as Baeyer-Villiger oxidn. catalysts)
RN 171878-44-7 HCAPLUS
CN Aluminum iron magnesium carbonate hydroxide (Al2Fe0.6Mg6(CO3)1.3(OH)17.2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	17.2	14280-30-9
Mg	6	7439-95-4
Fe	0.6	7439-89-6
Al	2	7429-90-5
CO3	1.3	3812-32-6

L56 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:526028 HCAPLUS
DN 115:126028
TI Extraction spectrophotometric method for the determination of ascorbic acid in pharmaceutical preparations, urine and fruit juices with potassium iodate
AU Qureshi, Saidul Zafar; Saeed, Ahsan; Haque, Seema; Khan, Mubeen Ahmad
CS Dep. Chem., Aligarh Muslim Univ., Aligarh, 202 002, India
SO Talanta (1991), 38(6), 637-9
CODEN: TLNTA2; ISSN: 0039-9140
DT Journal
LA English
CC 80-6 (Organic Analytical Chemistry)
Section cross-reference(s): 9, 17, **64**
AB An indirect detn. of ascorbic acid is based on extn. of the iodine produced by redn. of potassium iodate. Beer's law is obeyed over the range 0.02-0.36 mg/mL ascorbic acid.
ST ascorbic acid detn indirect extn spectrophotometry; potassium iodate reagent ascorbic acid detn; pharmaceutical analysis ascorbic acid; urine analysis ascorbic acid; fruit juice analysis ascorbic acid
IT Lemon juice
Orange juice
Pharmaceutical analysis
Tomato juice
Urine analysis
(ascorbic acid detn. in, by indirect extn. and spectrophotometry)
IT 64664-41-1, Cilatin 135726-29-3, Hematrin 135726-30-6, Besiton **135749-24-5**, Rarical 135991-44-5, Livogen 135991-84-3, Sukcee
RL: ANST (Analytical study)
(ascorbic acid detn. in, by indirect extn. and spectrophotometry)
IT 50-81-7, L-Ascorbic acid, analysis

RL: ANT (Analyte); ANST (Analytical study)
(detn. of, by indirect extn. and spectrophotometry)
IT 7758-05-6, Potassium iodate
RL: ANST (Analytical study)
(in ascorbate acid detn. by indirect extn. and spectrophotometry)
IT **135749-24-5**, Rarical
RL: ANST (Analytical study)
(ascorbic acid detn. in, by indirect extn. and spectrophotometry)
RN 135749-24-5 HCAPLUS
CN Vitamin B12, mixt. with N-[4-[[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]-L-glutamic acid, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methylthiazolium chloride, L-ascorbic acid, N-[(2R)-2,4-dihydroxy-3,3-dimethyl-1-oxobutyl]-.beta.-alanine calcium salt (2:1), 2-hydroxy-1,2,3-propanetricarboxylic acid calcium iron(2+) salt, 3-pyridinecarboxamide, riboflavin, (3.beta.,5Z,7E)-9,10-secocholesta-5,7,10(19)-trien-3-ol, vitamin A and vitamin B6 (9CI) (CA INDEX NAME)

CM 1

CRN 11103-57-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

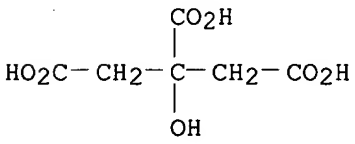
CM 2

CRN 8059-24-3
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 7600-56-8
CMF C6 H8 O7 . x Ca . x Fe



●x Ca

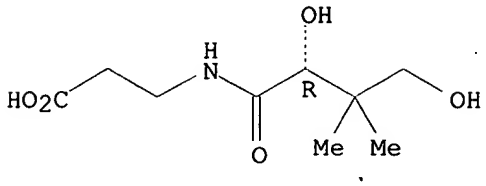
●x Fe(II)

CM 4

CRN 137-08-6

CMF C9 H17 N O5 . 1/2 Ca

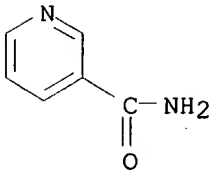
Absolute stereochemistry. Rotation (+).



●1/2 Ca

CM 5

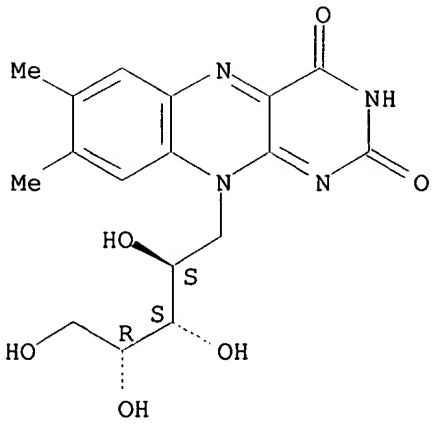
CRN 98-92-0
CMF C6 H6 N2 O



CM 6

CRN 83-88-5
CMF C17 H20 N4 O6

Absolute stereochemistry.

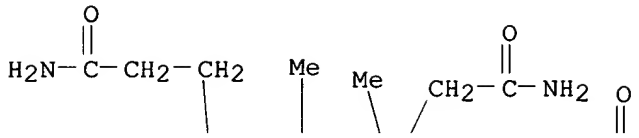


CM 7

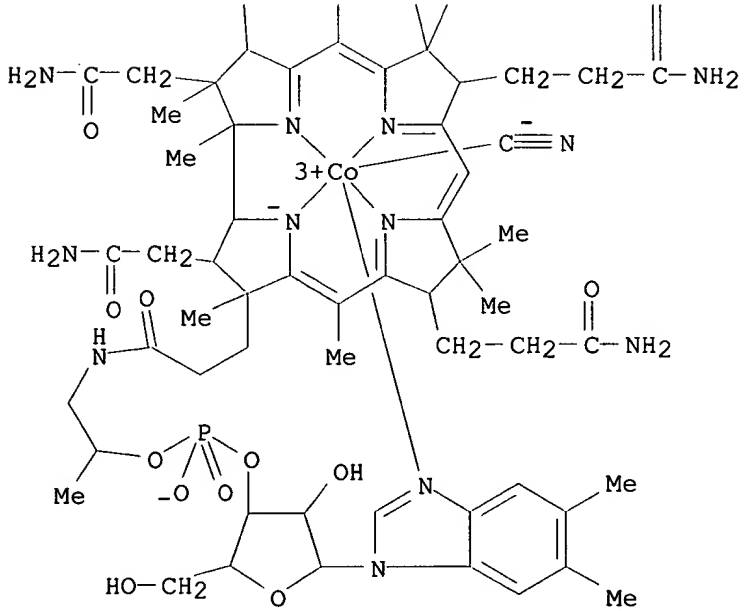
CRN 68-19-9

CMF C63 H88 Co N14 O14 P
CCI CCS

PAGE 1-A



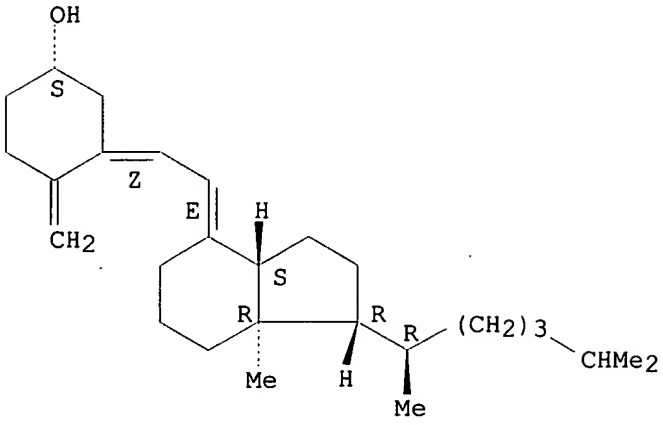
PAGE 2-A



CM 8

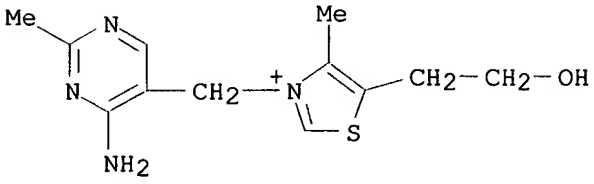
CRN 67-97-0
CMF C27 H44 O

Absolute stereochemistry.
Double bond geometry as shown.



CM 9

CRN 59-43-8
CMF C12 H17 N4 O S . Cl

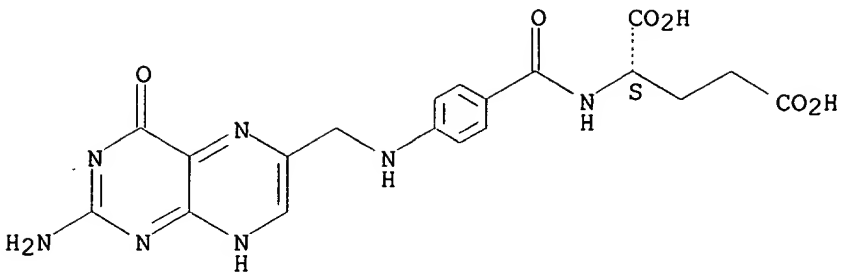


● Cl⁻

CM 10

CRN 59-30-3
CMF C19 H19 N7 O6

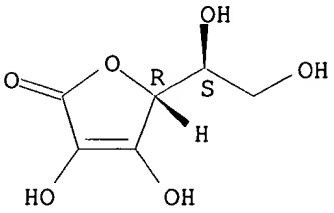
Absolute stereochemistry.



CM 11

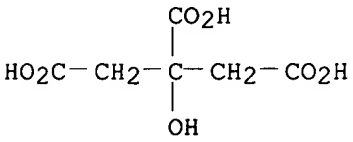
CRN 50-81-7
CMF C6 H8 O6

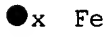
Absolute stereochemistry.



L56 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:165105 HCAPLUS
DN 112:165105
TI Moessbauer spectroscopic characterization of some iron-containing medicines
AU Sud, Mudita; Taneja, A. K.; Jain, V. K.; Vishwamittar; Taneja, S. P.
CS Dep. Phys., Panjab Univ., Chandigarh, 160 014, India
SO Indian J. Pure Appl. Phys. (1990), 28(3), 154-6
CODEN: IJOPAU; ISSN: 0019-5596
DT Journal
LA English
CC 64-3 (**Pharmaceutical** Analysis)
Section cross-reference(s): **63**
AB Some medicines contg. ferrous calcium citrate, ferrous succinate, and iron dextran complexes were investigated using Moessbauer spectroscopy. Moessbauer parameters are compared with the available data for pure compds. and used to characterize the contents of the samples. Ratio of ferrous and ferric compds. was also obtained.
ST Moessbauer spectroscopy iron pharmaceutical
IT Pharmaceutical analysis
(iron compds. detn. in, by Moessbauer spectroscopy)
IT Spectrochemical analysis
(Moessbauer, iron compds. detn. in pharmaceuticals by)
IT 7439-89-6D, Iron, dextran complexes **7600-56-8**, Ferrous calcium citrate 9004-54-0D, Dextran, iron complexes 17022-52-5, Ferrous succinate
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in pharmaceuticals by Moessbauer spectroscopy)

IT **7600-56-8**, Ferrous calcium citrate
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in pharmaceuticals by Moessbauer spectroscopy)
RN 7600-56-8 HCAPLUS
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, calcium iron(2+) salt (9CI) (CA INDEX NAME)





L56 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1989:489326 HCAPLUS
DN 111:89326
TI Proton NMR spectroscopy of imidazole ligands in paramagnetic ferric and ferrous complexes and clusters. Relevance to non-heme proteins
AU Wu, Feng Jung; Kurtz, Donald M., Jr.
CS Dep. Chem., Univ. Georgia, Athens, GA, 30602, USA
SO J. Am. Chem. Soc. (1989), 111(17), 6563-72
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): **1**, 77
AB To provide an overview of the 1H NMR behavior expected for imidazole ligands to paramagnetic non-heme iron, a set of ferric and ferrous imidazole complexes and a new set of binuclear and trinuclear clusters were prepd. and studied. For the effectively octahedral high-spin [Fe(II)(RIm)6]2+ [RIm = R-substituted imidazole (R = N-Me, N-Et, 5-Me)], the isotropic shifts at 300 K are exclusively contact in origin. For these complexes, .sigma. spin delocalization dominates, and the order of downfield isotropic shifts at 300 K is N(1)-H > 5-H > 4-H > N-Me .gtorsim. 5-Me. Anti-Curie behavior of the 4-H resonance at low temp. is attributed to a dipolar contribution in a lower symmetry structure. For low-spin Fe(III) direct .pi. spin delocalization leads to upfield contact contributions for imidazole ring protons and downfield contact contributions for ring methyls. In the case of low-spin [Fe(TICOH)2]3+ (TICOH = tris(N-methylimidazol-2-yl)hydroxymethane), dipolar contributions were quant. sepd. from the contact contributions. From this sepn. the orientation of the imidazole rings with respect to the principal magnetic axis was detd. For imidazole ligands in high-spin Fe(III) clusters, .sigma. spin delocalization leads to exclusively downfield isotropic shifts, usually in the order N(1)-H > 4-H > 5-H > 2-H > 5-Me .gtorsim. N-Me. The imidazole ligand 2-H and 4-H were observable only for the trinuclear basic Fe carboxylate clusters, due to an unusually short T1e. The results indicate that the histidyl ligand .beta.-CH2 should be

observable well downfield of 10 ppm for magnetically uncoupled high-spin Fe(III) sites and upfield of 9 ppm for -J .gtorsim. 30 cm-1. The imidazole N(1)-H (19.2 and 15.1 ppm) and acetate Me (10.2 ppm) resonances of the diiron(III) complex, [Fe2O(OAc)2(TIP)2]2+ (TIP = tris(imidazol-2-yl)phosphine), together confirm the presence of a .mu.-oxo rather than .mu.-hydroxo bridge in oxy- and methemerythrin; for azidomethemerythrin the NMR data indicate 62 cm-1 .ltorsim. -J .ltorsim. 122 cm-1. The 4.1 ppm sepn. between the 2 N(1)-H resonances of [Fe2O(OAc)2(TIP)2]2+ reflects the .mu.-oxo trans effect, which appears to be smaller than that in hemerythrin. For the mixed-valent basic Fe carboxylate clusters, valence delocalization allows the upfield dipolar contributions to the isotropic shifts to be understood in terms of distances and angles of the ligand protons with respect to magnetic axes of the cluster. The authors report the explosion of [Fe(TIP)2](ClO4)3.

ST NMR iron imidazole complex; cluster iron imidazole prepn NMR; safety explosion iron imidazolylphosphine perchlorate; isotropic shift iron imidazole complex

IT Proteins, specific or class
RL: RCT (Reactant)
(iron-contg. non-heme, NMR of imidazoles in paramagnetic ferric and ferrous complexes and clusters in relation to)

IT Nuclear magnetic resonance
(of imidazole ligands in paramagnetic ferric and ferrous complexes and clusters)

IT Explosion
(of iron perchlorate complex with imidazolylphosphine)

IT Carboxylic acids, compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(complexes, with iron and magnesium and imidazoles, prepn. and NMR of trinuclear)

IT Carboxylic acids, compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(iron complexes, with imidazoles, prepn. and NMR of trinuclear)

IT 121729-88-2 121729-91-7 121729-92-8 121729-93-9 121729-95-1
121729-97-3 121729-99-5 121730-01-6 121730-03-8 121730-05-0
121730-06-1
RL: PRP (Properties)
(NMR of)

IT 121729-90-6
RL: PROC (Process)
(explosion and NMR of)

IT 120359-42-4P 121729-24-6P 121729-26-8P 121729-27-9P 121729-29-1P
121729-30-4P 121729-32-6P 121729-33-7P 121729-41-7P 121729-43-9P
121729-44-0P 121729-48-4P 121729-53-1P 121729-57-5P 121729-59-7P
121729-65-5P 121729-77-9P **121729-80-4P** **121729-81-5P**
121729-82-6P 121729-84-8P 121729-86-0P 121730-10-7P
121730-12-9P 121730-15-2P 121730-16-3P 121730-20-9P 121754-63-0P
121754-67-4P 121754-69-6P 121754-70-9P **121754-74-3P**
121754-76-5P 121787-73-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR of)

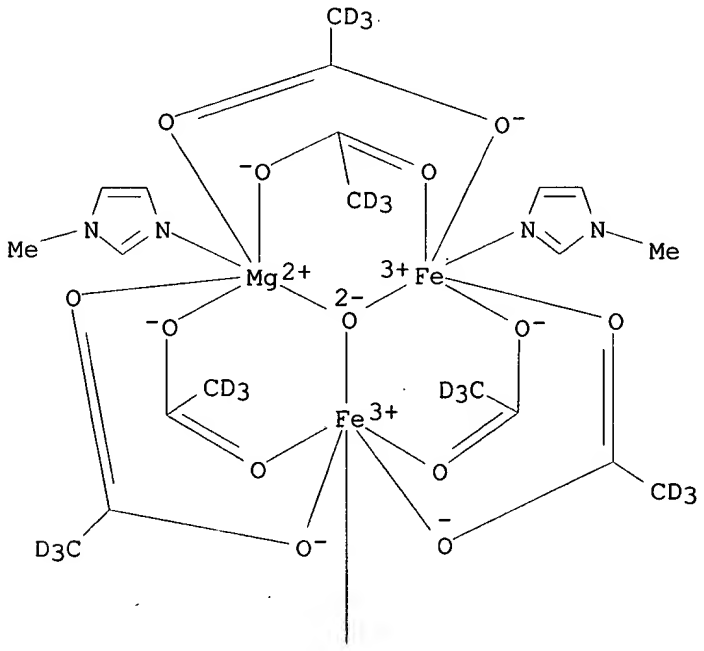
IT **121754-72-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and magnetic moment of)

IT 15050-84-7 87495-23-6
RL: RCT (Reactant)
(reaction of, with sodium carboxylates and imidazoles)

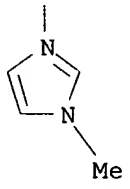
IT 63976-81-8
RL: RCT (Reactant)
(substitution reaction of, with ethylimidazole)

IT 36354-69-5
RL: RCT (Reactant)
(substitution reaction of, with imidazoles)
IT **121729-85-9**
RL: RCT (Reactant)
(substitution reaction of, with methylimidazole)
IT **101997-10-8**
RL: RCT (Reactant)
(substitution reaction of, with methylimidazole or pyridine)
IT **121730-06-1**
RL: PRP (Properties)
(NMR of)
RN 121730-06-1 HCAPLUS
CN Magnesium, tetrakis[.mu.-(acet-d3-ato-O:O')][bis[.mu.-(acet-d3-ato-O:O')]bis(1-methyl-1H-imidazole-N3)diiron](1-methyl-1H-imidazole-N3)-.mu.3-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



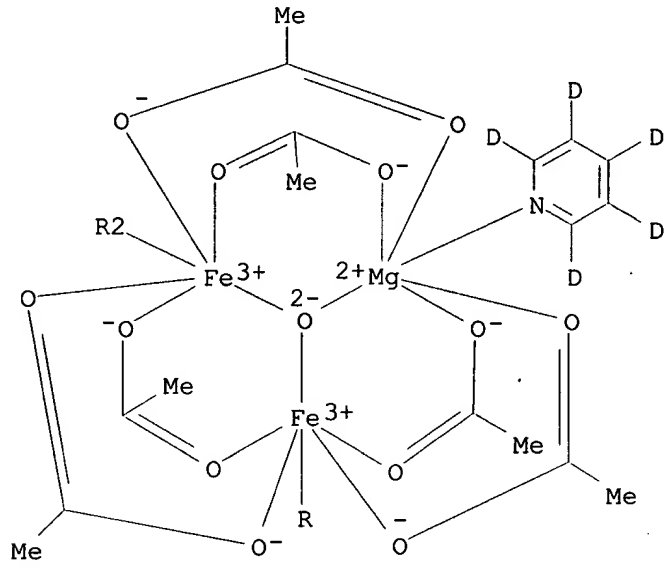
IT **121729-80-4P 121729-81-5P 121729-82-6P**
121754-74-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR of)

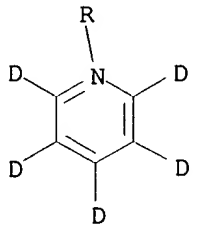
RN 121729-80-4 HCAPLUS

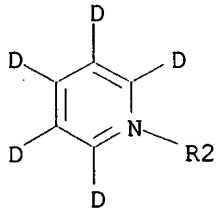
CN Magnesium, tetrakis[.mu.-(acetato-O:O')][bis[.mu.-(acetato-O:O')]bis(pyridine-d5)diiron]-.mu.3-oxo(pyridine-d5)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

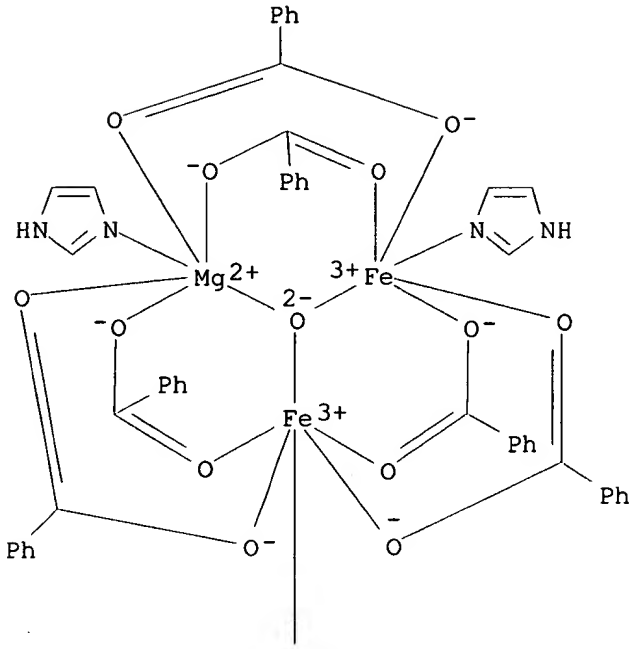




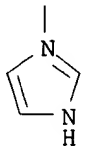
RN 121729-81-5 HCAPLUS

CN Magnesium, tetrakis[.mu.-(benzoato-O:O')][bis[.mu.-(benzoato-O:O')]bis(1H-imidazole-N3)diiron](1H-imidazole-N3)-.mu.3-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A

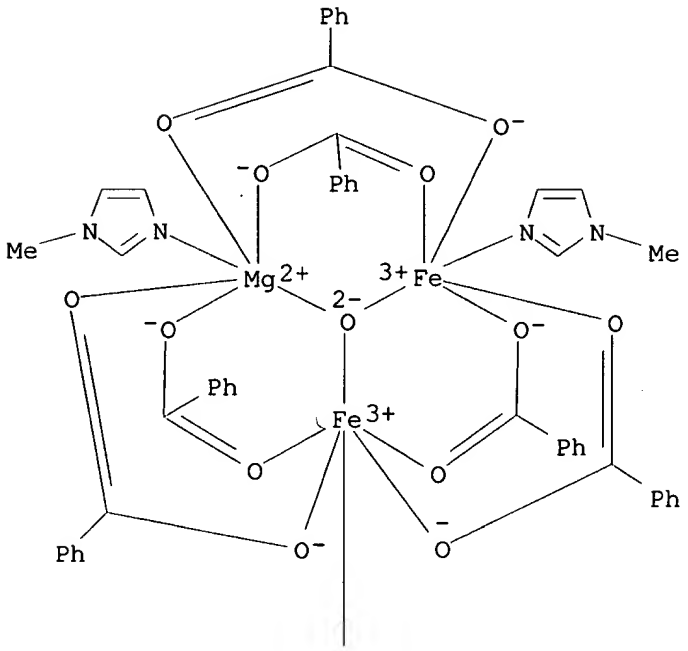


PAGE 2-A

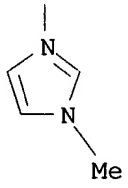


RN 121729-82-6 HCAPLUS
CN Magnesium, tetrakis[.mu.-(benzoato-O:O')][bis[.mu.-(benzoato-O:O')]bis(1-methyl-1H-imidazole-N3)diiron](1-methyl-1H-imidazole-N3)-.mu.3-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A

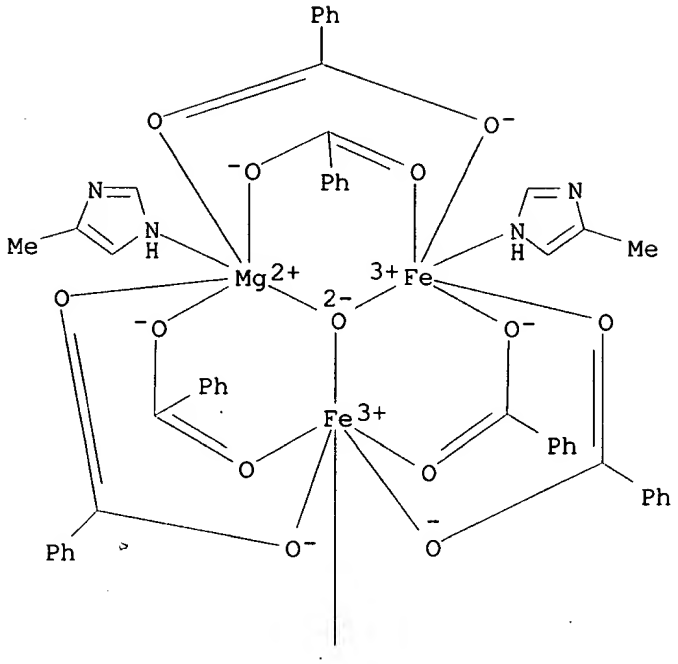


PAGE 2-A

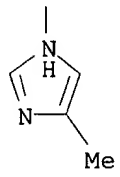


RN 121754-74-3 HCAPLUS
CN Magnesium, tetrakis[.mu.-(benzoato-O:O')][bis[.mu.-(benzoato-O:O')]bis(4-methyl-1H-imidazole-N1)diiron](4-methyl-1H-imidazole-N1)-.mu.3-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A

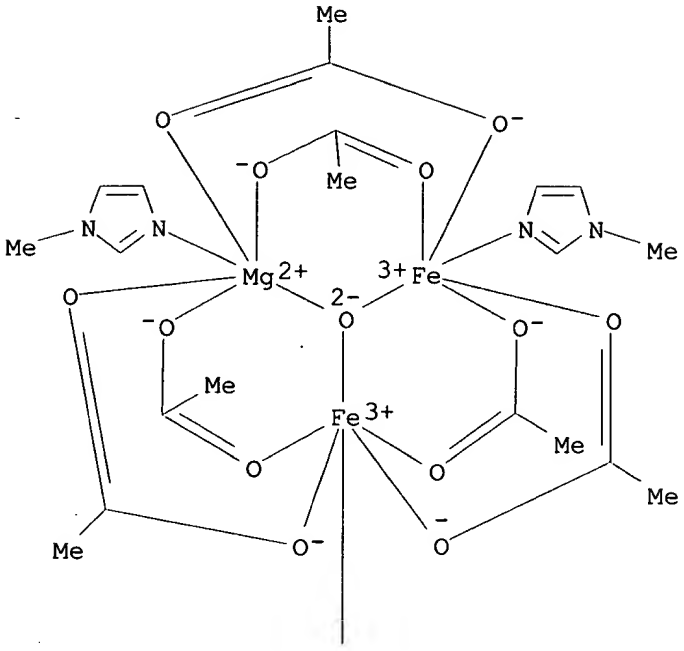


PAGE 2-A

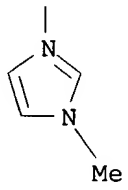


IT **121754-72-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and magnetic moment of)
RN 121754-72-1 HCAPLUS
CN Magnesium, tetrakis[.mu.-(acetato-O:O')][bis[.mu.-(acetato-O:O')]bis(1-methyl-1H-imidazole-N3)diiron](1-methyl-1H-imidazole-N3)-.mu.3-oxo- (9CI) (CA INDEX NAME)

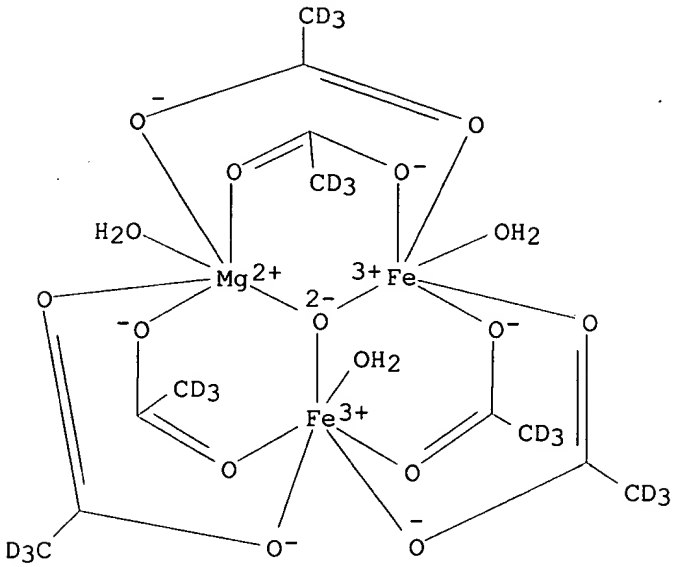
PAGE 1-A



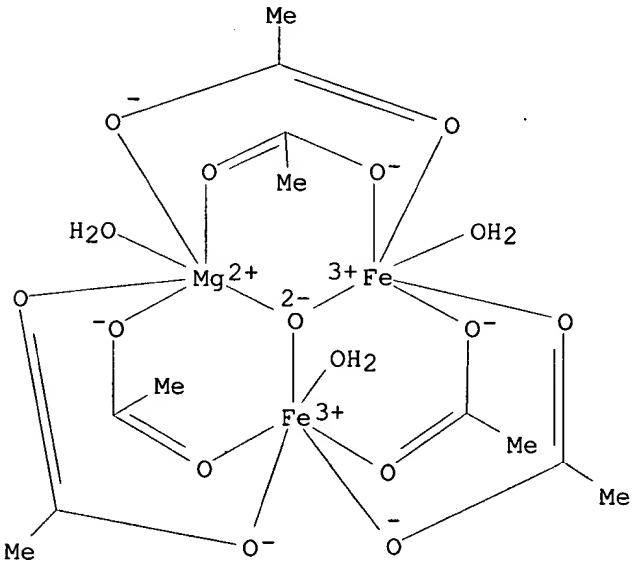
PAGE 2-A



IT **121729-85-9**
RL: RCT (Reactant)
(substitution reaction of, with methylimidazole)
RN 121729-85-9 HCAPLUS
CN Magnesium, tetrakis[.mu.-(acet-d3-ato-O:O')][bis[.mu.-(acet-d3-ato-O:O')]diaquadiiron]aqua-.mu.3-oxo- (9CI) (CA INDEX NAME)



IT **101997-10-8**
RL: RCT (Reactant)
(substitution reaction of, with methylimidazole or pyridine)
RN 101997-10-8 HCAPLUS
CN Magnesium, tetrakis[.mu.-(acetato-O:O')]aqua[bis[.mu.-(acetato-O:O')]diaquadiiron]-.mu.3-oxo- (9CI) (CA INDEX NAME)

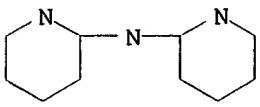


L56 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:215299 HCAPLUS
DN 108:215299
TI Exploitation of crystalline architecture and solution data in the rational preparation of novel mixed-metal ATP complexes
AU Cini, Renzo; Marzilli, Luigi G.

CS Dep. Chem., Univ. Siena, Siena, 53100, Italy
SO Inorg. Chem. (1988), 27(11), 1855-6
CODEN: INOCAJ; ISSN: 0020-1669
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 75
AB A rational method for obtaining novel mixed-metal ATP crystals was tested exptl. The method involves exploiting both the extensive amt. of soln. data on metal **binding** to nucleoside **triphosphates** and the limited information on cryst. ATP complexes. It was noted previously that Mg2+, Ca2+, and Mn2+ formed crystals from solns. at pH .apprx.4.5 contg. a salt of these metals, 2,2'-dipyridylamine (DPA), and ATP in the ratio of 1:1:1. The ATP ligands were protonated at N(1). These crystals had the metal in 2 different environments, [M(H2O)6][M'(HATP)2].2(HDPA).nH 2O. Salts of other metals did not form crystals readily. Since these other metals preferred N over O, interaction with the adenine base precluded crystn. Studies of crystal growth with 2 metal salts, 1 being MgSO4 or Ca(NO3)2, yielded crystals contg., for example, Cd. Several mixed metal compds. were prepd. using half an equiv. of each metal salt with respect to DPA and ATP. [Ca(H2O)6][Cd(HATP)2].2(HDPA).9H2O (I) and [Mg(H2O)6]0.72[Zn(H2O)6]0.28[Zn(HATP)2].2(HDPA).12H2O (II) were studied crystallog. The crystals are orthorhombic, space group C2221 with a 22.846(3), b 10.252(2), c 31.914(6) .ANG., Z = 4, d.(calcd.) = 1.58 g/cm3, for I and a 22.666(3), b 10.131(2), c 30.893(6) .ANG., Z = 4, d.(calcd.) = 1.66 g/cm3, for II. From soln. studies, compds. with the triphosphate chains form more stable complexes with Cd2+ and Zn2+ than with the alk. earth metal ions. The mode of coordination and the conformation of the triphosphate chains in I and II are very similar to those found in previous studies. The effect of the larger size of the Cd, in addn. to the expected longer Cd-O bonds, is mainly evident in some of the ribose torsional angles.
ST crystal structure ATP metal complex; ATP cadmate zincate dipyridamine adduct; magnesium aqua zincate ATP; calcium aqua cadmate ATP
IT Crystal structure
Molecular structure
(of cadmate ATP complex salt with hexaaquacalcium and zinc ATP complex salt with hexaaquamagnesium and hexaaquazinc)
IT 114221-37-3P 114298-58-7DP, solid soln. with hexaaqua magnesium analog 114350-43-5DP, solid soln. with hexaaqua zinc analog
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and crystal structure of)
IT **114249-88-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT **114249-88-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 114249-88-6 HCAPLUS
CN Magnesium(2+), hexaaqua-, (OC-6-11)-, hydrogen (OC-6-1'2')-bis[adenosine 5'-(triphosphato)(4-)-OP,OP',OP'']ferrate(6-) (1:4:1), compd. with N-2-pyridinyl-2-pyridinamine (1:2), dodecahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 1202-34-2
CMF C10 H9 N3



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 114249-87-5
CMF C20 H24 Fe N10 O26 P6 . H12 Mg O6 . 4 H

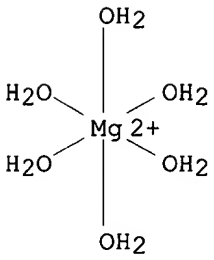
CM 3

CRN 114249-86-4
CMF C20 H24 Fe N10 O26 P6
CCI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 19592-06-4
CMF H12 Mg O6
CCI CCS



L56 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:135071 HCAPLUS
DN 108:135071
TI New members of the hydrotalcite-manasseite group
AU Drits, V. A.; Sokolova, T. N.; Sokolova, G. V.; Cherkashin, V. I.
CS Geol. Inst., Moscow, USSR
SO Clays Clay Miner. (1987), 35(6), 401-17
CODEN: CLCMAB; ISSN: 0009-8604
DT Journal
LA English
CC 53-1 (Mineralogical and Geological Chemistry)
AB Several new minerals, structurally and chem. similar to the hydrotalcite-manasseite group, were found in the saline deposits of the central pre-Caspian depression and in those of Soviet Central Asia. The minerals consist of layers of (Mg1-xAlx)(OH)2 plus interlayers of anions and mol. water. In addn. to manasseite itself, having unit-cell parameters of a = 3.042, c = 2 .times. 7.56 = 15.12 .ANG. and a calcd. d. (Dc) of 2.15 g/cm3, other varieties were identified the interlayers of which alternately contain SO42- or SO42- and CO32- anions. The following

new phases were recognized: (1) an 8.85-.ANG. phase having the compn. [(Mg4Al2)(OH)12][(SO4).3H2O], subcell dimensions of a' = 3.04, c' = 8.85 .ANG., and Dc = 1.96 g/cm3; (2) an 11-.ANG. phase having the compn. [(Mg3.96Fe0.06Al1.98)(OH)12][Na0.56(SO4)1.30.7.3H2O], hexagonal unit-cell parameters of a = .sqroot.3 .times. 3.042 = 5.28 .ANG., c = 11.16 .ANG., and Dc = 1.90 g/cm3; (3) a 16.5-.ANG. mixed-layer phase having the compn. [(Mg4Al2)(OH)12][(SO4)0.5(CO3)0.5.3H2O] and an ordered ABAB... alternation of 7.56-.ANG. layers (i.e., a brucite-like layer + a CO32--contg. interlayer) and 8.94-.ANG. layers contg. SO42- anions in interlayers; this phase has unit-cell dimensions of a' = 3.05, c' = 16.5 .ANG. and Dc = 2.06 g/cm3; and (4) an 18.5-.ANG. ordered mixed-layer phase having the ideal compn. [(Mg8Al4)(OH)24][M+0.5(SO4)1.25(CO3)1.0.9H2O] and an alternation of 7.56-.ANG., CO3-contg. layers and 11-.ANG. layers having SO42- anions and Na and Mg cations in interlayers (M+0.5 corresponds to interlayer cations). This last phase has unit-cell dimensions of a = 3.046, c = 3 .times. 18.54 = 55.62 .ANG. and Dc = 1.99 g/cm3. Some of the varieties contg. SO42- in the interlayers swelled on the addn. of glycol or glycerol. For this diverse family of minerals, having structures based on brucite-like layers of the compn. (R2+1-xR3+x)(OH)2, a unifying system of nomenclature is presented. By means of symbols, a single term can be used to describe the crystal chem. of any member of the group having a given cation compn. for the brucite-like layers.

ST hydrotalcite manasseite group mineral USSR

IT Minerals, new
RL: PRP (Properties)
(of hydrotalcite-manasseite group)

IT Minerals
RL: PRP (Properties)
(unnamed, sulfate-dominant analogs of hydrotalcite-manasseite group, compn. and crystal structure of, in saline sedimentary formations, of USSR)

IT 12304-65-3D, Hydrotalcite, interstratification compd. with sulfate hydrotalcite 12351-90-5 100090-51-5D, Sulfate hydrotalcite, interstratification compd. with hydrotalcite
RL: OCCU (Occurrence)
(compn. and crystal structure of, in saline sedimentary formations, of pre-Caspian Depression and Central Asia, USSR)

IT **113553-25-6D**, mineral
RL: OCCU (Occurrence)
(of **hydrotalcite**-manasseite group, compn. and crystal structure of, in saline sedimentary formations, of USSR)

IT 113553-27-8D, mineral
RL: OCCU (Occurrence)
(of hydrotalcite-manasseite group, compn. and crystal structure of, in saline sedimentary formations, of pre-Caspian Depression and Central Asia, USSR)

IT **113553-25-6D**, mineral
RL: OCCU (Occurrence)
(of **hydrotalcite**-manasseite group, compn. and crystal structure of, in saline sedimentary formations, of USSR)

RN 113553-25-6 HCAPLUS

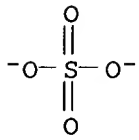
CN Aluminum iron magnesium carbonate hydroxide sulfate (Al1.97Fe0.07Mg3.96(CO3)0.34(OH)12(SO4)0.68), trihydrate (9CI) (CA INDEX NAME)

CM 1

CRN 113553-24-5
CMF C O3 . Al . Fe . H O . Mg . O4 S
CCI TIS

CM 2

CRN 14808-79-8
CMF O4 S



CM 3

CRN 14280-30-9
CMF H O

OH^-

CM 4

CRN 7439-95-4
CMF Mg

Mg

CM 5

CRN 7439-89-6
CMF Fe

Fe

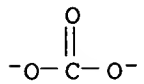
CM 6

CRN 7429-90-5
CMF Al

Al

CM 7

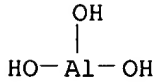
CRN 3812-32-6
CMF C O3



L56 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:465003 HCAPLUS
DN 107:65003
TI The sodium content of liquid antacids
AU Herzog, P.; Walther, C.; Holtermueller, K. H.
CS Med. Klin., St.-Markus-Krankenhaus, Frankfurt/Main, 6000/50, Fed. Rep. Ger.
SO DMW, Dtsch. Med. Wochenschr. (1987), 112(8), 302-4
CODEN: DDMWDF
DT Journal
LA German
CC 64-4 (**Pharmaceutical** Analysis)
AB The Na content of 13 liq. antacids was detd. using 2 independent anal. methods (flame photometry). With a neutralization buffering capacity of 564 mmol/day (pH 3.5) the possible body Na load was calcd. by evaluating the Na content in the supernatant of the antacid suspensions, ranging from 0.56 to 568 mmol/day (method A) and from 0.42 to 468 mmol/day (method B). Therefore, in patients who are on a Na restriction of 50 mmol/day this crit. intake may be easily exceeded by the intake of certain antacids.
ST sodium detn liq antacid
IT Antacids and Antiflatulents
(liq., sodium detn. in)
IT 7440-23-5, Sodium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in liq. antacids)
IT 7784-30-7, Phosphalugel 8059-80-1 8077-28-9, Gelusil 12304-65-3, Talcid 37317-08-1, Maaloxan 51683-06-8 **64550-26-1**, Gastropulgit 66220-42-6, Solugastril 66220-43-7, Locid 74978-16-8, Riopan
RL: ANST (Analytical study)
(sodium detn. in liq.)
IT **64550-26-1**, Gastropulgit
RL: ANST (Analytical study)
(sodium detn. in liq.)
RN 64550-26-1 HCAPLUS
CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

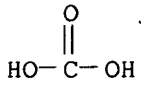
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



● Mg

CM 3

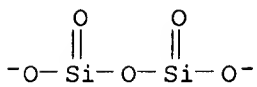
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

OH^-

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

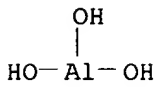
CRN 7429-90-5
CMF Al

Al

L56 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:161788 HCAPLUS
DN 104:161788
TI Do antacid agents with a high acid-binding capacity influence mineral metabolism?
AU Dollinger, H. C.; Holzberg, E.
CS Abt. I-Inn. Med., Bw-Krankenhaus, Munich, D-8000/90, Fed. Rep. Ger.
SO Med. Klin. (Munich) (1986), 81(1), 15-19
CODEN: MEKLA7; ISSN: 0025-8458
DT Journal
LA German
CC 1-9 (**Pharmacology**)
AB The metab. of Ca2+, phosphate, and Mg2+ by healthy men was not changed by magaldrate (Riopan) [74978-16-8] or by 2 antacids with higher acid-binding capacity: Gastropulgit [**64550-26-1**] and Maalox [37317-08-1]. However, the latter 2 compds. caused a greater increase in serum Al3+ than did magaldrate. The lesser effect of magaldrate on serum Al3+ is probably due both to the lower Al content in magaldrate and to the layered lattice structure of the latter. The clin. relevance of possible nephrotoxic effects of Al3+ accumulation as a result of antacid treatment is discussed.
ST antacid mineral metab; aluminum metab antacid
IT Mineral elements
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metab. of, antacids effect on, in humans)
IT Antacids and Antiflatulents
(mineral elements metab. response to, in humans)
IT 7429-90-5, biological studies 7439-95-4, biological studies 7440-70-2, biological studies 14265-44-2, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metab. of, antacids effect on, in humans)
IT 37317-08-1 **64550-26-1** 74978-16-8
RL: BIOL (Biological study)
(mineral elements metab. response to, in humans)
IT **64550-26-1**
RL: BIOL (Biological study)
(mineral elements metab. response to, in humans)
RN 64550-26-1 HCAPLUS
CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

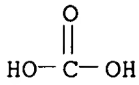
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



● Mg

CM 3

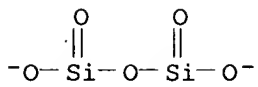
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

CRN 7429-90-5
CMF Al

Al

L56 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:223539 HCAPLUS
DN 102:223539
TI IR characteristics of hydrotalcite-like compounds
AU Hernandez-Moreno, Maria J.; Ulibarri, Maria A.; Rendon, J. L.; Serna, Carlos J.
CS Dep. Quim. Inorg., Univ. Cordoba, Cordoba, Spain
SO Phys. Chem. Miner. (1985), 12(1), 34-8
CODEN: PCMIDU; ISSN: 0342-1791
DT Journal
LA English
CC 53-1 (Mineralogical and Geological Chemistry)
Section cross-reference(s): 75
AB The IR spectra of well characterized hydrotalcite-like compds. with formulas in which M2+/M3+ = 2 and M2+/M3+ = 3 (where M2+ = Mg, Ni, Fe, etc. and M3+ = al, Fe, etc.) indicate that octahedral cation ordering is only present in the compds. with M2+/M3+ = 2. For M2+/M3+ ratios >2, the octahedral sheets are disordered, although local cation order can be present through cation segregation. The order-disorder characteristics of these compds. can be explained by the total cation-charge around any OH which cannot be >7 nor <6 units. In addn., the IR spectra suggest that the interlayer anions are sym. perturbed, the electrostatic interaction being greater for the 2/1 compns.
ST hydrotalcite compd IR spectra
IT Infrared spectra
(of hydrotalcite-like compds.)
IT 59249-46-6 **96492-33-0** 96492-35-2
RL: OCCU (Occurrence)

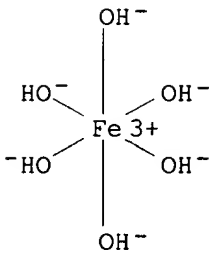
(4f **hydrotalcite** structure, IR characteristics of)
IT 12304-65-3
RL: OCCU (Occurrence)
(compds. with structure of, IR spectra of)
IT 96380-32-4 96492-31-8
RL: OCCU (Occurrence)
(of hydrotalcite structure, IR spectra of)
IT **96492-33-0**
RL: OCCU (Occurrence)
(4f **hydrotalcite** structure, IR characteristics of)
RN 96492-33-0 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium carbonate (2:4:1), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 96492-32-9
CMF C O3 . 2 Fe H6 O6 . 4 Mg

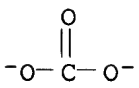
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3



L56 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:81962 HCAPLUS
DN 102:81962
TI Experimental alteration of tholeiitic basaltic glass by seawater between 3 and 50.degree.C
AU Crovisier, Jean Louis; Ehret, Gabrielle; Eberhart, Jean Pierre; Juteau, Thierry
CS Lab. Cristallogr., Mineral. Petrogr., Inst. Geol., Strasbourg, 67084, Fr.
SO Sci. Geol., Bull. (1983), 36(2-3), 187-206
CODEN: BIGPA8; ISSN: 0302-2692

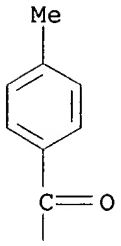
DT Journal
LA French
CC 53-3 (Mineralogical and Geological Chemistry)
AB The interaction products were characterized of glass surfaces by expts. (.ltoreq.600.degree. at 3, 25, and 50.degree.) using artificial tholeiitic glass and natural and artificial seawater. At 50.degree., **hydrotalcite** [12304-65-3] formed after 20 days. The crystals were covered (after 480-595 days) by an amorphous material with chem. compn. similar to that of saponite [1319-41-1]. A fibrous layer existed between the glass and **hydrotalcite**, which may be a mixt. of Mg-Al-Fe hydroxides and phyllosilicates. At 25.degree., a pyroaurite [**12351-92-7**]-like mineral formed after 240 days. Then, an amorphous product (Fe-Si-Ti) covered the crystal. In some expts., an alteration cover was obsd. consisting of poorly crystd. smectite. At 3.degree., an alteration cover appeared after 600 days. It consisted of akaganeite [12134-57-5], Al-K phyllosilicate, and an amorphous Si-Al-Fe-Ca-Mg material. The principal exchangers between glass and solns. at 25-50.degree. are the contribution of Mg and CO2 from seawater to form hydroxycarbontes and a release of Ca to soln.; at 3.degree., a contribution of K from seawater goes to form an illite-type phyllosilicate.
ST tholeiite glass alteration seawater
IT Waters, ocean
(alteration of tholeiitic glass by, products from)
IT Clay minerals
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, by seawater alteration of tholeiitic glass)
IT Glass, oxide
RL: PRP (Properties)
(volcanic, tholeiitic, alteration of, by seawater, products from)
IT 1319-41-1P 12134-57-5P 12304-65-3P 12351-92-7P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, by seawater alteration of tholeiitic glass)

L56 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:615957 HCAPLUS
DN 99:215957
TI Vein mineralization of the Vozhminskii serpentinite massif of eastern Karelia
AU Rundkvist, T. V.
CS Geol. Inst., Apatity, USSR
SO Zap. Vses. Mineral. O-va. (1983), 112(5), 559-64
CODEN: ZVMOAG; ISSN: 0044-1805
DT Journal
LA Russian
CC 53-1 (Mineralogical and Geological Chemistry)
AB The veinlets consists predominantly of fibrous varieties of highly magnesian minerals. Brucite [1317-43-7] is the most widespread mineral and commonly occurs intergrown with chrysotile [12001-29-5] asbestos. Pyroaurite [**12351-92-7**] is also widespread and comprised >90% of some samples. Calcn. of the formula for the pyroaurite from chem. anal. indicates that it does not contain a **hydrotalcite** constituent. Dolomite is the most common non-fibrous mineral of the veinlets.
ST mineralogy veinlet serpentine massif Karelia
IT 12001-29-5
RL: OCCU (Occurrence)
(asbestiform, of veinlets in serpentinite massif, of Karelia, USSR)
IT 1317-43-7 12351-92-7
RL: OCCU (Occurrence)

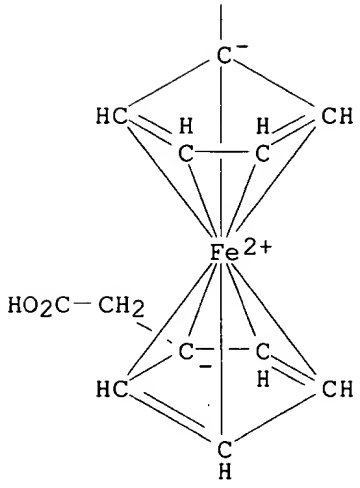
(fibrous, of veinlets in serpentinite massif, of Karelia, USSR)

L56 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:54131 HCAPLUS
DN 98:54131
TI Replacement of aromatic or heteroaromatic groups in nonsteroidal antiinflammatory agents with the ferrocene group
AU Maryanoff, Bruce E.; Keeley, Stanley L.; Persico, Frank J.
CS Dep. Chem., McNeil Pharm., Spring House, PA, 19477, USA
SO J. Med. Chem. (1983), 26(2), 226-9
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 29-12 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): **1**, **63**
OS CASREACT 98:54131
AB Ferrocene analogs of the antiinflammatory agents tolmetin, fenbufen, flurbiprofen and fenclofenac were synthesized and tested for biol. activity. The derivs. exhibited little or no antiarthritic or platelet antiaggregatory activity, indicating that the ferrocene moiety is a poor bioisostere for arom. or heteroarom. groups in nonsteroidal antiinflammatory agents.
ST antiinflammatory agent ferrocene analog; tolmetin ferrocene analog; fenbufen ferrocene analog
IT Inflammation inhibitors and Antiarthritics
(ferrocene analogs of antiinflammatory agents, lack of activity in)
IT 1287-16-7 1291-72-1 12126-42-0 12126-43-1 75458-57-0 **75458-59-2** **75458-61-6**
RL: RCT (Reactant)
(biol. testing of, as antiinflammatory agent)
IT 7446-70-0, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for reaction of ferrocene with pyrrole chlorocarbonyl deriv.)
IT **75458-60-5P** 83542-63-6P **83546-55-8P** 83546-60-5P **83546-61-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and biol. testing of)
IT 75-44-5
RL: RCT (Reactant)
(reaction of, with Me methylpyrroleacetete)
IT 51856-79-2
RL: RCT (Reactant)
(reaction of, with phosgene)
IT 102-54-5
RL: RCT (Reactant)
(reaction of, with pyrrole chlorocarbonyl deriv. in presence of aluminum chloride)
IT **75458-59-2** **75458-61-6**
RL: RCT (Reactant)
(biol. testing of, as antiinflammatory agent)
RN 75458-59-2 HCAPLUS
CN Ferrocene, 1-(carboxymethyl)-1'-(4-methylbenzoyl)-, calcium salt (9CI) (CA INDEX NAME)

PAGE 1-A

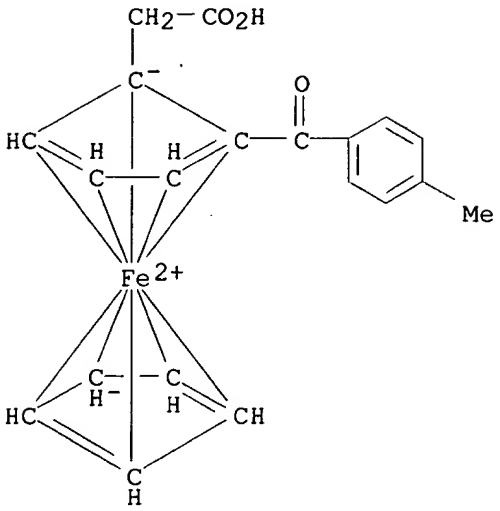


PAGE 2-A



●1/2 Ca

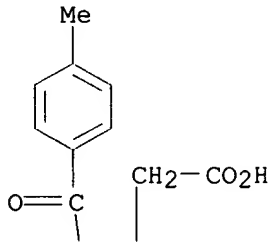
RN 75458-61-6 HCAPLUS
CN Ferrocene, 1-(carboxymethyl)-2-(4-methylbenzoyl)-, calcium salt (9CI) (CA INDEX NAME)



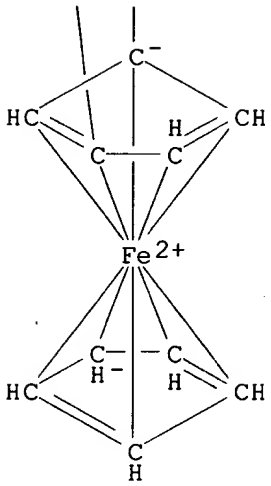
●1/2 Ca

IT **75458-60-5P 83546-55-8P 83546-61-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and biol. testing of)
RN 75458-60-5 HCAPLUS
CN Ferrocene, 1-(carboxymethyl)-3-(4-methylbenzoyl)-, calcium salt (9CI) (CA INDEX NAME)

PAGE 1-A



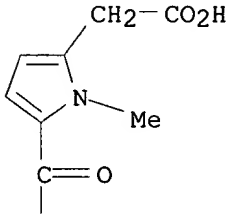
PAGE 2-A



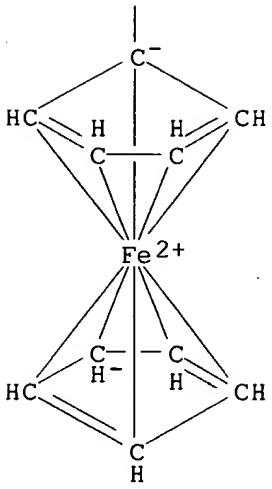
●1/2 Ca

RN 83546-55-8 HCAPLUS
CN Ferrocene, [[5-(carboxymethyl)-1-methyl-1H-pyrrol-2-yl]carbonyl]-, calcium salt (9CI) (CA INDEX NAME)

PAGE 1-A



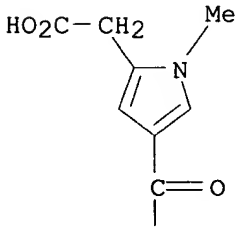
PAGE 2-A



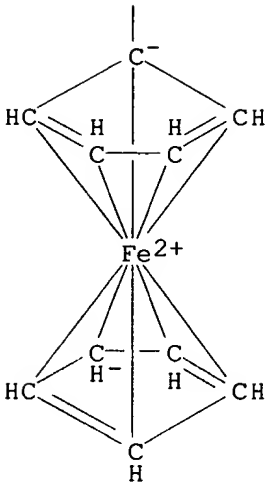
●1/2 Ca

RN 83546-61-6 HCAPLUS
CN Ferrocene, [[5-(carboxymethyl)-1-methyl-1H-pyrrol-3-yl]carbonyl]-, calcium salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

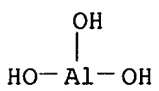


●1/2 Ca

L56 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:150494 HCAPLUS
DN 94:150494
TI The influence of Gastropulgit on intragastric pH values. Telemetric examinations using the Heidelberg capsule
AU Heinkel, K.
CS Med. Klin. Stuttgart-Bad Cannstatt, Stuttgart, 7000/50, Fed. Rep. Ger.
SO Z. Gastroenterol. (1980), 18(11), 555-67
CODEN: ZGASAX; ISSN: 0044-2771
DT Journal
LA German
CC 1-6 (**Pharmacodynamics**)
AB A comparative study of the antacid effect of Gastropulgit [**64550-26-1**] and NaHCO3 in patients demonstrated the former to be more effective. Gastropulgit caused a consistent shift of the acidic gastric pH (1.3) to a more weakly acidic pH (6.2), whereas NaHCO3 shifted the acidic pH to the alk. range pH 8.07. However, the return of a gastric acid pH was significantly slower and less pronounced with gastropulgit than with NaHCO3. The antacid effect of Gastropulgit appears to be due not only to an acid neutralization effect but also due to an action on the function of the gastric mucosa.
ST Gastropulgit antacid
IT Stomach, metabolism
(acid secretion by, Gastropulgit effect on)
IT **64550-26-1**
RL: PRP (Properties)
(antacid effect of)
IT **64550-26-1**
RL: PRP (Properties)
(antacid effect of)
RN 64550-26-1 HCAPLUS
CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

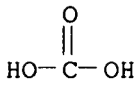
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



● Mg

CM 3

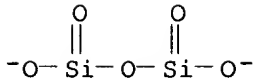
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

OH^-

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

CRN 7429-90-5
CMF Al

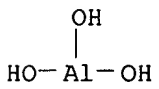
Al

L56 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:568647 HCAPLUS
DN 91:168647
TI Effect of acetylsalicylic acid and an antacid preparation (Gastropulgit Tabs) on the transmural gastric electrical potential difference in humans
AU Caspary, W. F.; Kausch, H.
CS Med. Klin. Poliklin., Univ. Goettingen, Goettingen, Fed. Rep. Ger.
SO Fortschr. Med. (1979), 97(30-31), 1333-6
CODEN: FMDZAR; ISSN: 0015-8178
DT Journal
LA German
CC 1-6 (**Pharmacodynamics**)
AB Gastropulgit Tabs [**64550-26-1**], a new antacid in tablet form, prevented acetylsalicylic acid [50-78-2]-induced decreases in the transmural p.d. in healthy volunteers.
ST Gastropulgit Tabs stomach aspirin
IT Stomach, toxic chemical and physical damage
(mucosa, aspirin damage to, Gastropulgit Tabs prevention of)
IT **64550-26-1**
RL: BIOL (Biological study)
(aspirin effect on stomach mucosa prevention by)
IT 50-78-2
RL: BIOL (Biological study)
(stomach mucosa damage by, Gastropulgit Tabs prevention of)

IT **64550-26-1**
RL: BIOL (Biological study)
(aspirin effect on stomach mucosa prevention by)
RN 64550-26-1 HCAPLUS
CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

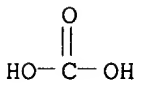
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



● Mg

CM 3

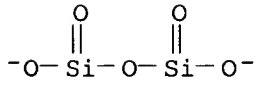
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

OH^-

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

CRN 7429-90-5
CMF Al

Al

L56 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:163820 HCAPLUS
DN 88:163820
TI Binding of bile acids to antacids
AU Caspary, W. F.; Graf, S.
CS Abt. Gastroenterol. Stoffwechselerkrankungen, Med. Univ.-Klin, Goettingen, Ger.
SO Verh. Dtsch. Ges. Inn. Med. (1977), 83, 1714-17
CODEN: VDGIA2; ISSN: 0070-4067
DT Journal
LA German
CC 1-2 (**Pharmacodynamics**)
AB Binding of Na taurocholate [145-42-6], Na glycocholate [863-57-0], or Na chenodeoxycholate [2646-38-0] to cholestyramine [11041-12-6], Aludrox [21645-51-2], Phosphalugel [13765-93-0], Gelusil [8077-28-9], Solugastril [66220-42-6], Gastropulgit [**64550-26-1**], Locid [66220-43-7], or Maaloxan [37317-08-1] was studied. Of the bile acids, chenodeoxycholate was bound by the com. antacids to a greater extent than glycocholate; taurocholate was bound to the least extent. Of the com. antacids, Aludrox had the greatest binding effect. A therapeutic dose of

4 g cholestyramine bound 3240 .mu.mol glycocholate or 3840 .mu.mol chenodeoxycholate, whereas a therapeutic dose of 20 mL Aludrox bound 752 .mu.mol glycocholate and 1188 .mu.mol chenodeoxycholate.

ST Aludrox bile acid; bile salt antacid; cholestyramine chenodeoxycholate glycocholate

IT Bile acids
RL: PROC (Process)
(antacids binding of)

IT Antacids
(bile acids binding by)

IT 145-42-6 863-57-0 2646-38-0
RL: PROC (Process)
(antacids binding of)

IT 7784-30-7 8077-28-9 11041-12-6 37317-08-1 **64550-26-1** 66220-42-6 66220-43-7
RL: BIOL (Biological study)
(bile acid binding by)

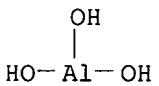
IT **64550-26-1**
RL: BIOL (Biological study)
(bile acid binding by)

RN 64550-26-1 HCAPLUS

CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

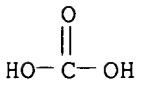
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



CM 3

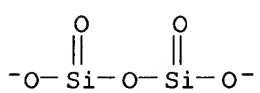
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

OH^-

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

CRN 7429-90-5
CMF Al

Al

L56 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1977:594166 HCAPLUS
DN 87:194166

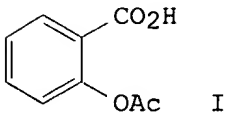
TI Antacids and gastric mucosa; protective effect of an antacid on acetylsalicylic acid induced functional changes in human gastric mucosa

AU Caspary, W. F.; Kausch, H.
CS Med. Klin. Poliklin., Univ. Goettingen, Goettingen, Ger.

SO Fortschr. Med. (1977), 95(31), 1931-4
CODEN: FMDZAR
DT Journal
LA German

CC 1-6 (**Pharmacodynamics**)

GI



I

AB The fall in transmural p.d. across the gastric mucosa was used as a quant. model of gastric-function disturbance caused by acetylsalicylic acid (I) [50-78-2]. Intragastric instillation of 640 mg I into healthy persons caused a considerable fall of the transmural p.d. This fall did not occur when 20 mL of Gastropulgite [**64550-26-1**], an antacid gel contg. Al(OH)3, MgCO3, and attapulgite, was given together with I. The antacid therefore protected the gastric mucosa against acute damage by I.

ST aspirin stomach antacid; acetylsalicylate stomach Gastropulgite

IT Stomach, toxic chemical and physical damage
(mucosa, acetylsalicylic acid toxicity to, Gastropulgite inhibition of)

IT **64550-26-1**
RL: BIOL (Biological study)
(stomach mucosa damage from acetylsalicylic acid inhibition by)

IT 50-78-2
RL: BIOL (Biological study)
(stomach mucosa damage from, antacid inhibition of)

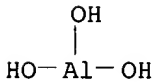
IT **64550-26-1**
RL: BIOL (Biological study)
(stomach mucosa damage from acetylsalicylic acid inhibition by)

RN 64550-26-1 HCAPLUS

CN Carbonic acid, magnesium salt (1:1), mixt. with aluminum hydroxide (Al(OH)3) and palygorskite ([Mg(Al0.5-1Fe0-0.5)]Si4(OH)O10.4H2O) (9CI) (CA INDEX NAME)

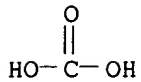
CM 1

CRN 21645-51-2
CMF Al H3 O3



CM 2

CRN 546-93-0
CMF C H2 O3 . Mg



● Mg

CM 3

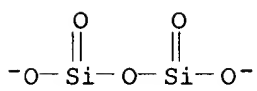
CRN 12174-11-7
CMF Al . Fe . 4 H2 O . H O . Mg . O5 Si2
CCI MNS

CM 4

CRN 111059-81-5
CMF Al . Fe . H O . Mg . O5 Si2
CCI TIS

CM 5

CRN 20328-07-8
CMF O5 Si2



CM 6

CRN 14280-30-9
CMF H O

CM 7

CRN 7439-95-4
CMF Mg

Mg

CM 8

CRN 7439-89-6
CMF Fe

Fe

CM 9

CRN 7429-90-5
CMF Al

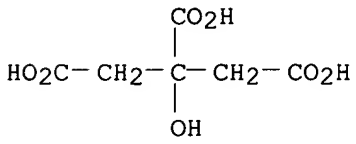
Al

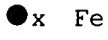
L56 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1971:67679 HCAPLUS
DN 74:67679
TI Use of iron chelates as antianemic agents
AU Cardoso, Humberto T.; Franca, L. C. Penna; Cabral, Manoel D'A.
CS Div. Estudos, Lab. Mauricio Villela, Brazil
SO Hospital (Rio de Janeiro) (1970), 77 1807-13
CODEN: HOSOA3
DT Journal
LA Portuguese
CC 63 (**Pharmaceuticals**)
AB Fe(III) Ca chelates of .delta.-gluconolactone with a 1:1, 2:1, and 3:1 metal content ratio were prepd. according to techniques used for other trivalent metals, the compds. being stable, nonhygroscopic, tasteless, and sol. at pH 8.5-9.5. At acid pH insol. chelates with a similar Fe content were formed.
ST iron gluconolactone anemia; gluconolactone iron anemia; anemia iron gluconolactone; chelates iron gluconolactone
IT Gluconic acid, iron complexes, D-
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT **32627-54-6P 32627-55-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT **32627-54-6P 32627-55-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 32627-54-6 HCAPLUS
CN Ferrate(3-), aqua[hydrogen D-gluconato(3-)]dioxo-, calcium sodium (2:1:4) (8CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 32627-55-7 HCAPLUS

L56 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2002 ACS
AN 1962:446028 HCAPLUS
DN 57:46028
OREF 57:9181e-f
TI Absorption of orally administered ferrous calcium citrate and its effect on children suffering from deficiency anemia
AU Hertzfeld, S.; Tamir, I.
CS Hadassah Hosp., Tel Aviv, Israel
SO Harokeach Haivri (1962), 9, 142-53
DT Journal
LA English

CC 73 (**Pharmacodynamics**)
AB The hemopoietic response including serum Fe values was detd. in a comprehensive study of absorption of FeSO4 (I) and ferrous calcium citrate (II). II was superior to I in effect on serum Fe level and in the increase of erythrocytes, reticulocytes, and hemoglobin.
IT Anemia
(calcium Fe citrate and iron sulfate in treatment of)
IT Absorption (biological)
(of ferrous Ca citrate and ferric sulfate)
IT 7720-78-7, Iron sulfate, FeSO4
(anemia response to)
IT **7600-56-8**, Calcium iron citrate
(in anemia treatment)
IT **7600-56-8**, Calcium iron citrate
(in anemia treatment)
RN 7600-56-8 HCAPLUS
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, calcium iron(2+) salt (9CI) (CA INDEX NAME)





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L40       113250 SEA FILE=HCAPLUS ABB=ON  L39
L41          155 SEA FILE=HCAPLUS ABB=ON  L40 AND ?HYDROTALCITE?
L42            1 SEA FILE=HCAPLUS ABB=ON  L41 AND HYPERPHOSPHATEMI?
L43            1 SEA FILE=HCAPLUS ABB=ON  L41 AND ?PHOSPHATE?(3A)BIND?
L44           96 SEA FILE=HCAPLUS ABB=ON  L40 AND ?PHOSPHATE?(3A)BIND?
L45            2 SEA FILE=HCAPLUS ABB=ON  L40 AND HYPERPHOSPHATEMI?
L46            2 SEA FILE=HCAPLUS ABB=ON  (L44 OR L45) AND PHARMA?/SC,SX
L47          842 SEA FILE=REGISTRY ABB=ON  (FE(L)(MG OR CA OR CE OR LA)(L)C(L)H(
                 L)O)/ELS
L49          594 SEA FILE=HCAPLUS ABB=ON  L47
L50           16 SEA FILE=HCAPLUS ABB=ON  L49 AND PHARMAC?/SC,SX
L51            3 SEA FILE=HCAPLUS ABB=ON  L49 AND THU/RL
L53            2 SEA FILE=HCAPLUS ABB=ON  L49 AND ?PHOSPHAT?(3A)BIND?
L54            1 SEA FILE=HCAPLUS ABB=ON  L49 AND HYPERPHOS?
L55           13 SEA FILE=HCAPLUS ABB=ON  L49(L)?TALCITE?
L56           31 SEA FILE=HCAPLUS ABB=ON  L42 OR L43 OR L45 OR L46 OR L50 OR
                 L51 OR L53 OR L54 OR L55
L57          152 SEA FILE=REGISTRY ABB=ON  L47(L)5/ELC.SUB
L58           98 SEA FILE=REGISTRY ABB=ON  L57 NOT 1-50/NR
L59          198 SEA FILE=HCAPLUS ABB=ON  L58
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L60         184 SEA FILE=HCAPLUS ABB=ON  (L56 OR L59) NOT L56
L61           9 SEA FILE=HCAPLUS ABB=ON  L60 AND ?PHOSPHAT?


=> d l61 all 1-9 hitstr

L61  ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2002 ACS
AN   2002:443063  HCAPLUS
DN   136:400996
TI   High quality artificial human milk powder
IN   Chen, Shengli; Chen, Baoguo; Chen, Baoxiang; Chen, Baofeng
PA   Peop. Rep. China
SO   Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
     CODEN: CNXXEV
DT   Patent
LA   Chinese
IC   ICM  A23C011-00
CC   17-8 (Food and Feed Chemistry)
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   CN 1310947         A    20010905       CN 2001-104283   20010228
AB   The milk is prepd. from malt juice 5-15, fruit juice 10-20, instant rice
     and bean powder 40-60, full egg powder 10-30, lactose 20-30, cream 10-20,
     lecithin 20-30, .omega.3-fatty acid 0.1-1, Zn gluconate 0.1-1, Fe Ca
     citrate 0.1-1, glycerol monostearate 3-4, and purified water.  The product
     is prepd. by mixing and spray drying process.  The product is fully
     nutrient.
ST   artificial human milk malt juice fruit juice; lactose cream
     phosphatide
IT   Butter
     Egg, poultry
     Rice (Oryza sativa)
     Soybean (Glycine max)
        (high quality artificial human milk powder)
IT   Lecithins
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (high quality artificial human milk powder)
IT   Milk substitutes
        (human; high quality artificial human milk powder)
IT   Malt
        (juice; high quality artificial human milk powder)
IT   Fatty acids, biological studies
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (polyunsatd., n-3; high quality artificial human milk powder)
IT   63-42-3, Lactose  4468-02-4, Zinc gluconate 7600-56-8, Calcium
     iron citrate  31566-31-1, Glycerol monostearate
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (high quality artificial human milk powder)
IT   7600-56-8, Calcium iron citrate
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (high quality artificial human milk powder)
RN   7600-56-8  HCAPLUS
CN   1,2,3-Propanetricarboxylic acid, 2-hydroxy-, calcium iron(2+) salt (9CI)
     (CA INDEX NAME)
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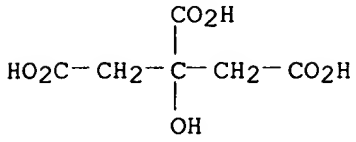

●x Ca

●x Fe(II)

L61 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:564961 HCAPLUS
DN 135:121799
TI Fertilizers and soil-conditioning agents comprising one-layered double hydroxide compounds and nutrient anions
IN Gillman, Gavin Patrick; Noble, Andrew Duncan
PA Commonwealth Scientific and Industrial Research Organisation, Australia
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C05D005-00
ICS C05D009-00; C05D011-00; C05B001-02; C05B021-00; C05G003-04; C09K017-02; C09K017-06
CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001055057	A1	20010802	WO 2001-AU26	20010112

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI AU 2000-5337 A 20000128
AB A fertilizer comprises at least one layered double hydroxide (LDH) compd. contg. at least one nutrient anion. In another aspect, the fertilizer comprising at least one clay material mixed with at least one nutrient cation. The fertilizer preferably comprises at least one layered double hydroxide (LDH) compd. contg. at least one nutrient anion and at least one clay material mixed with at least one nutrient cation. Methods for treating soil, for manufg. the fertilizer and for enhancing plant growth are also described, as are soil conditioning agents and soil-less culture media.
ST fertilizer soil conditioner one layered double hydroxide
IT Soil amendments
(fertilizers and soil-conditioning agents comprising one-layered double hydroxide compds. and nutrient anions)

IT Fertilizers
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizers and soil-conditioning agents comprising one-layered double hydroxide compds. and nutrient anions)
IT Bentonite, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizers and soil-conditioning agents contg.)
IT **12351-92-7**, Pyroaurite 12627-13-3, Silicate 14127-61-8, Calcium cation, biological studies 14213-97-9, Borate 14265-44-2, **Phosphate**, biological studies 14797-55-8, Nitrate, biological studies 15158-11-9, biological studies 22537-22-0, Magnesium ion, biological studies 23713-49-7, Zinc ion, biological studies 24203-36-9, Potassium ion, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizers and soil-conditioning agents contg.)
IT 12304-65-3, Hydrotalcite
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(one-layered; fertilizers and soil-conditioning agents contg.)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Henning, H; EP 326110 B1 1989 HCAPLUS
(2) Kanno, S; WO 9964374 A1 1999 HCAPLUS
(3) Lambeth, V; US 4168962 A 1979 HCAPLUS
(4) Mallinckrodt Inc; WO 7900261 A1 1979 HCAPLUS
(5) Marx Bergbau Gmbh & Co Kg; EP 192954 B1 HCAPLUS
(6) Seidel, S; DT 2531333 A1 1977
(7) The Australian National University; WO 9612674 A1 1996 HCAPLUS
IT **12351-92-7**, Pyroaurite
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fertilizers and soil-conditioning agents contg.)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:396989 HCAPLUS
DN 131:202320
TI Patterns in the compositions, properties, and geochemistry of carbonate minerals
AU Railsback, L. Bruce
CS Department of Geology, University of Georgia, Athens, GA, 30602-2501, USA
SO Carbonates and Evaporites (1999), 14(1), 1-20
CODEN: CAEVE9; ISSN: 0891-2556
PB Northeastern Science Foundation
DT Journal
LA English
CC 53-1 (Mineralogical and Geological Chemistry)
AB The diversity of carbonate minerals is remarkable. For example, 277 carbonate-bearing minerals have been recognized, and among them are 158 pure carbonates of cations with valences from 1+ to 6+. The other 119 minerals addnl. contain chloride, fluoride, borate, sulfate, **phosphate**, arsenate, arsenite, antimonate, or silicate groups, or combinations of those anions. However, combinations of anions with cations are not uniformly distributed, so that there are no bicarbonates or simple carbonates of highly-charged cations, few hydrated or OH-bearing minerals of monovalent cations, and few U-bearing carbonates with anions other than CO32, OH-, and O2-. On the other hand, simple carbonates of divalent cations, OH-bearing Al carbonates, and fluoride-bearing carbonates of rare-earth elements are remarkably numerous. Many of these

trends can be related to the coordination chem. of cations in the solns. from which these minerals form. Among nearly all the carbonate-bearing minerals, ionic potential of the cations is a major control on the extent of hydration. Degree of hydration is in turn a major control on hardness, d., and soly. Among the simple carbonates, hardness, d., and positions of spectroscopic peaks vary linearly with cation radius or mass, although such trends usually exist only within crystallog. groups or only within cation groups defined by the periodic table. In contrast, geochem. parameters, such as soly. and fractionation of oxygen isotopes, vary with degree of cation fit in the 6-fold or 9-fold site of the rhombohedral and orthorhombic simple carbonates, so that there is not a linear variation with cation size. The same is true for the distribution coeffs. of cations in calcite and aragonite. Patterns thus emerge among the compns., properties, and geochem. of the carbonate minerals, with cationic potential and type as a major influence on compn., with degree of hydration and cation radius or mass as a control on phys. and spectroscopic properties, but with cation fit as the major control on geochem. parameters. These patterns allow qual. prediction of mineral properties and help explain the origins of some of the major problems in carbonate petrol.

ST carbonate mineral pattern compn property geochem

IT Carbonate minerals
RL: PRP (Properties)
(patterns in the compns., properties, and geochem. of carbonate minerals)

IT 1111-79-1, Barytocalcite 1319-45-5, Azurite 1319-47-7, Hydrocerussite 1319-48-8, Leadhillite (Pb4(CO3)2O(SO4).H2O) 1319-49-9, Zaratite (Ni3(CO3)(OH)4.4H2O) 1319-53-5, Malachite 1319-56-8, Schroeckingerite (Ca3Na[U(CO3)3FO2(SO4)].10H2O) 5145-47-1, Lansfordite 5145-48-2, Barringtonite 11092-27-6, Carletonite 11118-39-1, Gaudefroyite (Ca4[Mn3(BO3)3(CO3)(OH)3]) 12069-37-3, Bismutite (Bi2(CO3)O) 12072-90-1, Hydromagnesite (Mg5(CO3)4(OH)2.4H2O) 12122-17-7, Hydrozincite (Zn5(CO3)2(OH)6) 12143-96-3, Artinite 12172-74-6, Ankerite 12172-81-5, Aurichalcite 12172-82-6, Bastnaesite-(Ce) ((Ce0.5-1La0-0.5)(CO3)F) 12172-98-4, Cancrinite (CaNa3[Al3(CO3)(SiO4)3]) 12172-99-5, Carbocernaite 12179-77-0, Jouravskite (Ca3Mn(Co3)(OH)6(SO4).12H2O) 12179-88-3, Burkeite (Na6(CO3)(SO4)2) 12180-10-8, Hanksite (KNa22(CO3)2Cl(SO4)9) 12180-11-9, Northupite (Na3[Mg(CO3)2Cl]) 12188-92-0, Tychite (Na6[Mg2(CO3)4(SO4)]) 12198-51-5, Lanthanite-(La) 12199-19-8, Rosasite 12199-46-1, Tengerite-(Y) ((Y0.5-1Dy0-0.5Gd0-0.5)2(CO3)3.xH2O) 12202-74-3, Caledonite 12202-79-8, Rutherfordine (U(CO3)O2) 12203-05-3, Ancylite 12261-87-9, Tilleyite (Ca5(CO3)2(Si2O7)) 12284-48-9, Burbankite 12286-83-8, Mckelveyite 12304-65-3, Hydrotalcite (Mg6(CO3)[Al(OH)6]2(OH)4.4H2O) **12351-92-7**, Pyroaurite 12403-33-7, Tunisite (Ca2NaH[Al2(CO3)2(OH)5]2) 12414-09-4, Benstonite 12415-00-8, Davyne 12415-02-0, Carbonate-fluorapatite (Ca5F[(PO4)0.5-0.9((CO3)(OH))0.1-0.5]3) 12417-68-4, Loseyite 12417-94-6, Giorgiosite 12419-35-1, Kettnerite (Ca[Bi(CO3)FO]) 12419-40-8, Callaghanite 12423-88-0, Tatarskite (Ca3Mg(CO3)Cl2O(SO4).xH2O) 12423-90-4, Schuilingite-(Nd) 12424-24-7, Sahamalite 12425-23-9, Thorbastnaesite 12425-44-4, Tundrite 12427-22-4, Stenonite (Sr2[Al(CO3)F5]) 12539-54-7, Bradleyite (Na3[Mg(CO3)(PO4)]) 12544-02-4, Dypingite 12601-07-9, Carbonate-cyanotrichite 12601-13-7, Ewaldite 12601-27-3, Lokkaite 13397-26-7, Calcite (Ca(CO3)), properties 13701-58-1, Vaterite 13717-00-5, Magnesite 13814-92-1, Gaylussite (CaNa2(CO3)2.5H2O) 14457-83-1, Nesquehonite (Mg(CO3).3H2O) 14476-12-1, Rhodochrosite 14476-13-2, Sphaerocobaltite 14476-15-4, Cerussite 14476-16-5, Siderite 14476-25-6, Smithsonite 14791-73-2, Aragonite 14941-39-0,

Witherite (Ba(CO3)) 14941-40-3, Strontianite 15243-77-3, Norsethite (BaMg(CO3)2) 15491-24-4, Natron (Na2(CO3).10H2O) 15752-47-3, Nahcolite (Na(HCO3)) 16314-29-7, Armangite (Mn3(AsO3)2) 16389-88-1, Dolomite, properties 18616-69-8, Kutnohorite 19569-21-2, Huntite 24189-28-4, Alstonite (BaCa(CO3)2) 24189-49-9, Ikaite (Ca(CO3).6H2O) 24189-70-6, Gaspeite 24250-44-0, Calkinsite 24329-38-2, Hellyerite (Ni(CO3).6H2O) 33636-45-2, Buetschliite (CaK2(CO3)2) 37428-30-1, Otavite 38890-12-9, Monohydrocalcite 53664-72-5, Glaukosphaerite 60181-83-1, Carrboydite 63038-20-0, Dawsonite (AlNa(CO3)2.2H2O) 65430-50-4, Otwayite 66256-91-5, Nakauriite 66524-19-4, Carbonate-hydroxylapatite (Ca5(OH)[(PO4)0.5-0.9((CO3)(OH))0.1-0.5]3) 66732-42-1, Wherryite 66733-48-0, Dundasite (Al2Pb(CO3)2O2.xH2O) 66733-66-2, Nasledovite (Al4PbMn3(CO3)4O5(SO4).5H2O) 66811-60-7, Motukoreaite 67712-21-4, Brenkite (Ca2(CO3)F2) 68629-34-5, Donnayite 70315-79-6, Kainosite 71372-92-4, Georgeite 72026-35-8, Nullaginite (Ni2(CO3)(OH)2) 73412-33-6, Hauckite 74434-02-9, Sergeevite 74742-80-6, Paralstonite 75137-58-5, Kovdorskite (Mg5(CO3)O(PO4)2.xH2O) 75137-63-2, Kolwezite 75137-64-3, Defernite 75137-71-2, Sabinaite (Na4[TiZr2(CO3)O4]) 77847-58-6, Lanthanite-(Nd) 79394-46-0, Mcguinnessite 80487-69-0, Mountkeithite 80940-65-4, Ferrotychite 82468-79-9, Natrite (Na2(CO3)) 82535-48-6, Minrecordite 83061-45-4, Claraite 83061-47-6, Lepersonnite 83380-57-8, Khanneshite 83700-26-9, Bonshtedtite 88593-09-3, Susannite 89885-19-8, Pokrovskite 90014-21-4, Macphersonite 96538-66-8, Kambaldaite (Na[Ni4(CO3)3(OH)O].4H2O) 96538-67-9, Lanthanite-(Ce) 104842-01-5, Rapidcreekite (Ca2(CO3)(SO4).4H2O) 106311-77-7, Heneuite (CaMg5(CO3)(OH)(PO4)3) 106311-85-7, Kimuraite-(Y) 108856-83-3, Moydite-(Y) ((Y0.5-1Dy0-0.5Gd0-0.5)[B(OH)4](CO3)) 112593-72-3, Paraotwayite 118850-97-8, Remondite-(Ce) ([(Ce0.5-1Nd0-0.5)0.5-0.67Ca0-0.33Na0.17-0.33]3Na3(CO3)5) 128285-72-3, Voggite (Na2Zr(CO3)(OH)(PO4).2H2O) 128706-42-3, Tuliokite (BaNa6Th(CO3)6.6H2O) 129317-50-6, Girvasite 131281-58-8, Sclarite 131377-37-2, Calcio-ancylite-(Nd) 132032-60-1, Znucalite (CaUZn11(CO3)3(OH)20O2.4H2O) 132883-67-1, Barstowite (Pb4(CO3)Cl6.H2O) 137508-79-3, Ashburtonite (H5[Cu4Pb4(CO3)4Cl(OH)4(SiO3)4]) 139901-35-2, Camerolaite 145564-08-5, Daqingshanite-(Ce) 146812-11-5, Olekminskite 147955-48-4, Ferrisurite ((Fe0.5-1Al0-0.5)2(Pb0.5-1Ca0-0.5)2-3Si4(CO3)2(OH)2[(OH)0.5-1F0-0.5]0-2O10.xH2O) 150828-26-5, Kamphaugite-(Y) 152008-08-7, Widgiemoolthalite (Ni5(CO3)4(OH)2.5H2O) 153133-78-9, Brianyoungite 155553-75-6, Shomiokite-(Y) 156229-93-5, Abenakiite-(Ce) 157012-09-4, Petersenite-(Ce) 161334-26-5, Qilianshanite ([NaH(CO3)][H3BO3].2H2O) 161587-08-2, Crawfordite 161993-38-0, Peterbaylissite (Hg3(CO3)(OH).2H2O) 165467-12-9, Shannonite 169789-66-6, Reederite-(Y) (Na15(Y0.5-1Ce0-0.5)2(CO3)9Cl(SFO3)) 183565-30-2, Krasnovite ((Al0.5-1Mg0-0.5)Ba(OH)2[(PO4)0.5-1(CO3)0-0.5].H2O) 191236-66-5, Sheldrickite (Ca3Na(CO3)2F3.H2O) 203528-60-3, Ancylite 241464-61-9, Zincrosasite 241470-60-0, Chlorartinite (Mg2(CO3)Cl(OH).3H2O) 241473-72-3, Albrechtschraufite

RL: PRP (Properties)
(patterns in the compns., properties, and geochem. of carbonate minerals)

RE.CNT 108 THERE ARE 108 CITED REFERENCES AVAILABLE FOR THIS RECORD

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IT **12351-92-7**, Pyroaurite
RL: PRP (Properties)
(patterns in the compns., properties, and geochem. of carbonate minerals)

RN 12351-92-7 HCAPLUS

CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:506560 HCAPLUS
DN 125:172857
TI Some observations on the synthesis, characterization and evaluation of multi-layered and pillared materials for process chemistry and the environment
AU Norris, J. O. W.; Atkins, M. P.; Zappelli, P.; Engelhardt, T.; Forano, C.; Alberti, G.
CS Harwell Lab., AEA Technology, Didcot/Oxfordshire, OX11 0RA, UK
SO AEA Technology, [Report] AEAT (1996), AEAT-0032, 20 pp.
CODEN: ATAEFG
DT Report
LA English
CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 67
AB Processes for the reproducible and predictable prepn. of pillared layered and multi-layered materials with regular interlayer spacings were developed. Three different types of layered materials were studied, namely, pillared and layered clays, zirconium **phosphates** and phosphonates, and layered double hydroxides (LDHs). Many novel materials were synthesized and characterized. The successful lab. syntheses were refined and, for representative materials, scaled up to produce several kilograms per batch. Materials were tested for catalytic behavior towards a range of industrially important processes, including olefin etherification (for manuf. of MTBE and TAME gasoline additives), catalytic cracking, isobutane alkylation, ethylene hydration, and glycol ether syntheses. Clay-based catalysts performed very well for the prodn. of MTBE and TAME, whereas chromium-copper based LDHs pillared with vanadate or molybdate polyoxometalate anions were very selective catalysts for the synthesis of glycol ethers.
ST multilayered pillared clay synthesis catalyst; petroleum refining pillared clay catalyst; zirconium **phosphate** petroleum refining catalyst; layered double metal hydroxide catalyst
IT Petroleum refining catalysts
(hydration; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT Bentonite, uses
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(pillared and layered; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT Alcohols, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(alkoxy, synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT Petroleum refining catalysts
(alkylation, synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT Gasoline additives
(antiknock, MTBE and TAME, manuf. of; catalytic evaluation of multilayered and pillared clays and materials for olefin etherification)
IT Petroleum refining catalysts
(cracking, synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT Petroleum refining catalysts
(etherification, catalytic evaluation of multilayered and pillared clays and materials for olefin etherification)
IT Ethers, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
(glycol, synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT Clays, uses
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(montmorillonitic, synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT Clays, uses
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(pillared, rectorite; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT 126180-64-1P 177179-48-5P 180387-80-8P 180388-57-2P
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(ZrO2-Zr **phosphates** functionalized with, layered; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT 25167-67-3, Butene
RL: RCT (Reactant); RACT (Reactant or reagent)
(catalytic evaluation of multilayered and pillared clays and materials for butene alkylation)

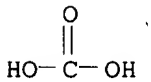
IT 14766-75-7P, Aluminum magnesium carbonate 56730-28-0P, Aluminum chromium nickel oxide 59458-43-4P, Aluminum chromium magnesium oxide 60240-56-4P, Aluminum magnesium chloride **61482-20-0P** 112673-67-3P 149852-78-8P, Aluminum vanadium zinc oxide 153593-64-7P, Chromium copper vanadium oxide 156166-17-5P, Aluminum chromium zinc oxide 169314-69-6P, Aluminum phosphorus zinc oxide 170621-28-0P, Aluminum magnesium vanadium oxide 180388-58-3P, Chromium copper chloride 180388-59-4P, Aluminum zinc chloride 180388-60-7P, Aluminum nickel chloride 180388-61-8P 180388-62-9P 180388-63-0P 180388-65-2P 180388-66-3P, Chromium copper molybdenum oxide 180388-67-4P, Aluminum magnesium phosphorus oxide 180388-68-5P, Aluminum nickel phosphorus oxide 180388-69-6P, Aluminum nickel vanadium oxide
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(co-pptn. of; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT 74-85-1, Ethylene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydration of; catalytic evaluation of multilayered and pillared clays and materials for ethylene hydration)

IT 7699-43-6P, Zirconyl chloride
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(hydrolyzed sol, pillaring material; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)

IT 880-68-2DP, 1,4-Benzenediphosphonic acid, reaction products with zirconium fluoro complexes 4671-77-6DP, 1,4-Butanediphosphonic acid, reaction products with zirconium fluoro complexes 6145-31-9DP, 1,2-Ethanediphosphonic acid, reaction products with zirconium fluoro complexes 7440-67-7DP, Zirconium, fluoro complexes, reaction products with diphosphonic acids 13817-79-3DP, reaction products with zirconium fluoro complexes 17919-31-2DP, reaction products with zirconium fluoro complexes
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(layered; synthesis, characterization, and evaluation of multilayered

and pillared clays and materials in chem. processes)
IT 994-05-8P, tert-Amyl methyl ether 1634-04-4P, Methyl tert-butyl ether
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(manuf. of; catalytic evaluation of multilayered and pillared clays and materials for olefin etherification)
IT 1314-23-4P, Zirconium dioxide, uses
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mixts. with Zr **phosphates**; layered; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT 13772-29-7P, Zirconium **phosphate** (Zr(HPO4)2)
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mixts. with ZrO2; layered; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT 1327-41-9P, Aluminum chloride, basic
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(pillaring material; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT 11104-65-7P, Chromium copper oxide
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
IT **61482-20-0P**
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(co-pptn. of; synthesis, characterization, and evaluation of multilayered and pillared clays and materials in chem. processes)
RN 61482-20-0 HCAPLUS
CN Carbonic acid, iron magnesium salt (9CI) (CA INDEX NAME)



●x Fe(x)

●x Mg

L61 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:85788 HCAPLUS
DN 120:85788
TI Recovery of aqueous industrial cleaning baths
IN Breuer, Wolfgang; Hater, Wolfgang
PA Henkel K.-G.a.A., Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent

LA German
IC ICM C23G001-36
ICA C10M175-00; C11D001-02; C11D001-66; C11D001-38; C11D001-88; C11D003-02; B01J020-02; B01J020-04; C01F007-00
CC 60-2 (Waste Treatment and Disposal)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4140745	A1	19930617	DE 1991-4140745	19911211
	WO 9312269	A1	19930624	WO 1992-EP2790	19921202

W: CA, JP, KR, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRAI DE 1991-4140745 19911211

AB Wastewaters from baths for cleaning surfaces are treated, after filtration and oil removal, with hydroxo salts of di- or trivalent metals, having the formula [M2+1-xM3+x(OH)2]Ax.cntdot.mH2O, where M2+ is .gtoreq.1 divalent metal, M3+ is .gtoreq.1 trivalent metal, A is the equiv. of an anion of a mono- or dibasic acid, 1/6 .ltoreq. x .ltoreq. 1/2 and 0 .ltoreq. m .ltoreq.1. The baths may contain alkali metal hydroxides, alkali metal carbonates, alkali metal silicates, alkali metal **phosphates**, and/or alkali metal borates, and may also contain complexing agents and corrosion inhibitors. The surfactant-detergent builder system remains intact. Suitable double salts include hydrotalcite, pyroaurite, magaldrate, and [Zn2Al2(OH)16]CO3.cntdot.mH2O.

ST cleaning bath recovery hydroxo salt; hydrotalcite cleaning bath recovery
IT Petroleum products
Wastewater treatment
Olive oil
Petroleum
RL: PROC (Process)
(surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
IT Alcohols, compounds
RL: MSC (Miscellaneous)
(C13-15, ethoxylated, surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
IT Fatty acids, uses
RL: USES (Uses)
(C14-18-unsatd., Edenor SB05; surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
IT Fatty acids, uses
RL: USES (Uses)
(rape-oil, OMC 392; surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
IT 67-63-0, Isopropanol, miscellaneous 109-99-9, Tetrahydrofuran, miscellaneous 112-80-1, Oleic acid, miscellaneous 112-85-6, Behenic acid 142-62-1, Capronic acid, miscellaneous 143-07-7, Lauric acid, miscellaneous 143-19-1, Sodium oleate 629-25-4, Sodium laurate 1310-73-2, Sodium hydroxide, miscellaneous 9004-98-2 10051-44-2, Sodium capronate 10377-60-3, Magnesium nitrate 12304-65-3, Hydrotalcite **12351-92-7**, Pyroaurite 13473-90-0, Aluminum nitrate 63691-26-9 74978-16-8, Magaldrate 152442-99-4, Arlicon Paste
RL: MSC (Miscellaneous)
(surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
IT **12351-92-7**, Pyroaurite
RL: MSC (Miscellaneous)
(surfactant-contg. cleaning bath recovery using hydroxo salts after filtration and oil removal)
RN 12351-92-7 HCAPLUS

CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:592547 HCAPLUS
DN 117:192547
TI Hydrophobic double-layer hydroxides as catalysts for alkoxylation
IN Breuer, Wolfgang; Raths, Hans Christian
PA Henkel K.-G.a.A., Germany
SO Ger. Offen., 14 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07C051-41
ICS C07C053-00; C07C055-02; B01J031-04
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4034305	A1	19920430	DE 1990-4034305	19901029
	WO 9207795	A1	19920514	WO 1991-EP1993	19911021
	W: BR, CA, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	EP 555246	A1	19930818	EP 1991-918050	19911021
	EP 555246	B1	19950621		
	R: DE, ES, FR, GB, IT				
	JP 06502139	T2	19940310	JP 1991-517049	19911021
	ES 2073176	T3	19950801	ES 1991-918050	19911021
	US 5326891	A	19940705	US 1993-50037	19930429
PRAI	DE 1990-4034305		19901029		
	WO 1991-EP1993		19911021		

AB The title catalysts have the compn. [M(II)1-xM(III)x(OH)2]AaBb.zH2O [M(II) = Mg, Zn, Ca, Fe, Co, Cu, Cd, Ni, Mn; M(III) = Al, Fe, Cr, Mn, Bi, Ce; A = 1 equiv. C2-34 monocarboxylate or C4-44 dicarboxylate; B = carbonate, sulfate, nitrate, nitrite, **phosphate**, hydroxide, halide; a = 0-0.5; b = 0-0.5, a + b = 0-0.5; x = 0.1-0.5; z = 0-10). Stirring 20 g Magaldrat [Mg10Al5(OH)31](SO4)2.zH2O] with 7.6 g Na laurate in 270 mL H2O at 70.degree. for 15 h gave 20.2 g hydrophobized product (I) contg. 25.9% laurate. Stirring a com. C12-C14 fatty alc. mixt. with 3 mol propylene oxide and 0.5% I at 150-160.degree. for 45 min gave a product with OH no. 174 and a uniform compn.
ST catalyst oxyalkylation hydroxide hydrophobic; Magaldrat hydrophobic catalyst oxyalkylation; laurate adduct Magaldrat catalyst; polymn epoxide alc catalyst; propylene oxide polymn catalyst; fatty alc alkoxylation catalyst
IT Polymerization catalysts
(hydrophobized double-layer hydroxides, for epoxides on fatty acids and alcs.)
IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of, catalysts for)
IT Alcohols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(fatty, polyoxyalkylation of, catalysts for)
IT Soaps
RL: USES (Uses)
(reaction products, with double-layer hydroxides, catalysts for polyoxyalkylation)

IT Fatty acids, polymers
RL: USES (Uses)
(unsatd., dimers, reaction products, with double-layer hydroxides, catalysts for polyoxyalkylation)
IT 57-11-4D, Stearic acid, reaction products with double-layer hydroxides 143-07-7D, Lauric acid, reaction products with double-layer hydroxides 629-25-4D, Sodium laurate, reaction products with double-layer hydroxides 822-16-2D, Sodium stearate, reaction products with double-layer hydroxides 10051-44-2D, Sodium capronate, reaction products with double-layer hydroxides 12304-65-3D, Hydrotalcite, reaction products with soaps **12351-92-7D**, Pyroaurite, reaction products with soaps 12418-02-9D, Hydrocalumite, reaction products with soaps 74978-16-8D, reaction products with soaps 144087-24-1D, Bismuth magnesium carbonate hydroxide, reaction products with soaps 144114-27-2D, Aluminum zinc carbonate hydroxide, reaction products with soaps
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for polyoxyalkylation)
IT 25322-69-4DP, Polypropylene glycol, fatty alkyl ethers
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of, catalysts for)
IT **12351-92-7D**, Pyroaurite, reaction products with soaps
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for polyoxyalkylation)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:454488 HCAPLUS
DN 117:54488
TI Clay- and/or other oxidic or nonoxidic raw material- and water-containing compositions for ceramics and glazes, and method for adjusting the rheology and/or moldability of the compositions
IN Geismar, Guenther; Endres, Helmut
PA Henkel K.-G.a.A., Germany
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C04B033-13
ICS C03C008-14
CC 57-2 (Ceramics)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4033730	A1	19920430	DE 1990-4033730	19901024

AB The compns., optionally contg. leaning agents, plasticizers, fluxes and/or thixotropic agents, contain .gtoreq.1 double-layered hydroxides having general formula [M(II)1-xM(III)x(OH)2]Ax.mH2O (I) [M(II) = divalent metal; M(III) = trivalent metal; A = mono- or polybasic acid group; 1/6 .ltoreq. x .ltoreq.0.5; 0 .ltoreq. m .ltoreq.1]. The rheol. and/or moldability of the compns. is adjusted by adding .gtoreq.1 of the above hydroxides in the prepn. of the raw materials before molding. This method esp. improves the castability of the ceramic and glaze compns. A is selected from carbonate, sulfate, chloride, nitrate, and **phosphate**, M(II) is selected from Mg, Ca, Mn, Zn, and Cu, M(III) is selected from Fe and Al, and the I's are selected from hydrotalcite, pyroaurite, magaldrate, and [Zn6Al2(OH)16]CO3.mH2O. The addn. of 0.05 wt.parts hydrotalcite to std. porcelain compns. gave elution time 81, vs. 66 s/100 mL for the

conventional compns.
ST rheol castable ceramic glaze hydroxide; hydrotalcite rheol ceramic glaze; pyroaurite rheol ceramic glaze; magaldrate rheol ceramic glaze; basic aluminum zinc carbonate rheol
IT Ceramic materials and wares
Glazes
(castable, rheol. adjustment of, double-cation basic salts for)
IT Feldspar-group minerals
RL: USES (Uses)
(fluxes, slips contg., double-cation basic salts in, for improved rheol.)
IT Plasticizers
(insol. calcium and magnesium complexes and salts, slips contg., double-cation basic salts in, for improved rheol.)
IT Sand
RL: USES (Uses)
(leaning agent, slips contg., double-cation basic salts in, for improved rheol.)
IT Rheology
(of slips, adjustment of, .0double-cation basic salts for)
IT Slips (suspensions)
(rheol. adjustment of, double-cation basic salts for)
IT Bentonite, uses
Kaolin, uses
Titanates
RL: USES (Uses)
(slips contg., double-cation basic salts in, for improved rheol.)
IT Salts, uses
RL: USES (Uses)
(basic, double-cation, slips contg., for improved rheol.)
IT Spinel-group minerals
RL: USES (Uses)
(iron, slips contg., double-cation basic salts in, for improved rheol.)
IT Alkali metals, compounds
RL: USES (Uses)
(salts, plasticizer precursors, slips contg., double-cation basic salts in, for improved rheol.)
IT Humic acids
RL: USES (Uses)
(sodium salts, plasticizer precursor, slips contg., double-cation basic salts in, for improved rheol.)
IT Polyphosphoric acids
RL: USES (Uses)
(sodium salts, plasticizer precursors, slips contg., double-cation basic salts in, for improved rheol.)
IT 471-34-1, Calcium carbonate, uses 1332-37-2, Iron oxide, uses
RL: USES (Uses)
(flux, slips contg., double-cation basic salts in, for improved rheol.)
IT 14808-60-7, Quartz, uses
RL: USES (Uses)
(leaning agent, slips contg., double-cation basic salts in, for improved rheol.)
IT 62-76-0, Sodium oxalate 1344-09-8, Water glass 7722-88-5 11138-49-1, Sodium aluminate
RL: USES (Uses)
(plasticizer precursor, slips contg., double-cation basic salts in, for improved rheol.)
IT 497-19-8, Sodium carbonate, uses
RL: USES (Uses)
(plasticizer precursors, slips contg., double-cation basic salts in,

for improved rheol.)
IT 7631-86-9
RL: USES (Uses)
(sand, leaning agent, slips contg., double-cation basic salts in, for improved rheol.)
IT 409-21-2, Silicon carbide (SiC), uses 1304-56-9, Beryllium oxide 1309-48-4, Magnesia, uses 1314-23-4, Zirconia, uses 1318-74-7, Kaolinite, uses 1344-28-1, Alumina, uses 7440-44-0, Carbon, uses 10043-11-5, Boron nitride (BN), uses 11104-85-1, Molybdenum silicide 11113-93-2, Uranium oxide 12033-89-5, Silicon nitride (Si3N4), uses 12045-63-5, Titanium boride 12069-32-8, Boron carbide (B4C) 12173-60-3, Illite 12244-16-5, Halloysite
RL: USES (Uses)
(slips contg., double-cation basic salts in, for improved rheol.)
IT 12304-65-3, Hydrotalcite **12351-92-7**, Pyroaurite 59249-47-7 74978-16-8, Magaldrate
RL: USES (Uses)
(slips contg., for improved rheol.)
IT **12351-92-7**, Pyroaurite
RL: USES (Uses)
(slips contg., for improved rheol.)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:558115 HCAPLUS
DN 113:158115
TI Method for removing arsenic or selenium from an aqueous solution containing a substantial background of another contaminant
IN O'Neill, Gary A.; Novak, John W.; Martin, Edward S.
PA Aluminum Co. of America, USA
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C02F001-42
NCL 210684000
CC 60-3 (Waste Treatment and Disposal)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4935146	A	19900619	US 1988-271501	19881115

AB A first and a second contaminant are removed from a soln., e.g., power plant wastewater or storm lakes, where the concn. of the first contaminant is much greater than that of the second, by contacting the soln. with an activated or calcined product of a compd. of the formula A6B2(OH)16D.4H2O, where A is a divalent metal cation, B is a trivalent metal cation, and D is a mono- to tetravalent anion. The method is esp. useful for removing both Se and SO42-, As and SO42-, or As and PO43- from wastewaters. Suitable compds. includes activated hydrotalcite.
ST selenium removal wastewater sorption; arsenic removal wastewater sorption
IT Bromides, uses and miscellaneous
Carbonates, uses and miscellaneous
Hydroxides
Nitrates, uses and miscellaneous
RL: PROC (Process)
(in removal of arsenic and selenium from wastewaters)
IT Selenates

RL: REM (Removal or disposal); PROC (Process)
(removal of, from wastewaters by absorption on hydrotalcite)
IT Chlorides, uses and miscellaneous
Fluorides, uses and miscellaneous
Phosphates, uses and miscellaneous
Sulfates, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from wastewaters contg. arsenic and selenium)
IT Wastewater treatment
(adsorption, for removal of arsenic and selenium from contaminated effluents)
IT 12304-65-3, Hydrotalcite **12351-92-7**, Pyroaurite 12415-20-2, Takovite
RL: PROC (Process)
(in removal of arsenic and selenium from polluted wastewaters)
IT 64-19-7D, Acetic acid, compds. 7429-90-5D, Aluminum, salts 7439-89-6D, Iron, salts 7439-95-4D, Magnesium, salts 7440-02-0D, Nickel, salts 7440-47-3D, Chromium, salts 13408-62-3 13408-63-4
RL: PROC (Process)
(in removal of arsenic and selenium from wastewaters)
IT 7440-38-2, Arsenic, uses and miscellaneous 7782-49-2, Selenium, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from wastewaters contg. other contaminants)
IT **12351-92-7**, Pyroaurite
RL: PROC (Process)
(in removal of arsenic and selenium from polluted wastewaters)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AN 1965:414105 HCAPLUS
DN 63:14105
OREF 63:2488f-g
TI Promotion of crystal growth
IN Spitzer, Penn F., Jr.; Burgenson, Oscar L., Jr.
PA American Cyanamid Co.
SO 5 pp.
DT Patent
LA Unavailable
NCL 260256400
CC 8 (Crystallization and Crystal Structure)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3180870		19650427	US	19600824

AB The crystn. of 2-aminodiazine bisulfite, ferrous calcium citrate, and acetylsulfanilyl chloride are improved by the addn. of a quaternary ammonium compd. of the general formula, [RCONHCH2CH2CH2N(R1)(R2)R3]+Y-, where R is C7+ aliphatic or alicyclic radical, R1 and R2 are C1-5 alkyl and hydroxy alkyl radicals, R3 is an alkyl, hydroxy alkyl, alkenyl, or aralkyl group, and Y is an inorg. anion. The concn. of the compd. should be 0.1-10% of the dry wt. of the cryst. org. material.
IT Crystals
(growth of, of acetylsulfanilyl chloride, 2-aminopyrimidinebisulfite or Ca ferrous citrate, in presence of (2-hydroxyethyl)dimethyl(3-stearamidopropyl)ammonium compds.)
IT Ammonium, (2-hydroxyethyl)dimethyl(3-stearamidopropyl)

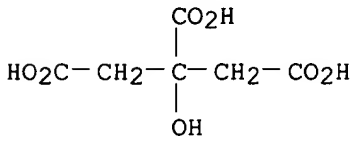
Ammonium, (2-hydroxyethyl)dimethyl(3-stearamidopropyl), dihydrogen **phosphate**
(crystal growth promotion by)

IT **7600-56-8**, Calcium iron citrate
(crystals of, growth of, in presence of (2-hydroxyethyl)dimethyl(3-stearamidopropyl)ammonium compds.)

IT **7600-56-8**, Calcium iron citrate
(crystals of, growth of, in presence of (2-hydroxyethyl)dimethyl(3-stearamidopropyl)ammonium compds.)

RN 7600-56-8 HCAPLUS

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, calcium iron(2+) salt (9CI) (CA INDEX NAME)



●x Ca

●x Fe(II)

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=> d que
L39        48706 SEA FILE=REGISTRY ABB=ON  (FE(L)(MG OR CA OR CE  OR LA))/ELS
L40       113250 SEA FILE=HCAPLUS ABB=ON  L39
L41          155 SEA FILE=HCAPLUS ABB=ON  L40 AND ?HYDROTALCITE?
L42            1 SEA FILE=HCAPLUS ABB=ON  L41 AND HYPERPHOSPHATEMI?
L43            1 SEA FILE=HCAPLUS ABB=ON  L41 AND ?PHOSPHATE?(3A)BIND?
L44           96 SEA FILE=HCAPLUS ABB=ON  L40 AND ?PHOSPHATE?(3A)BIND?
L45            2 SEA FILE=HCAPLUS ABB=ON  L40 AND HYPERPHOSPHATEMI?
L46            2 SEA FILE=HCAPLUS ABB=ON  (L44 OR L45) AND PHARMA?/SC,SX
L47          842 SEA FILE=REGISTRY ABB=ON  (FE(L)(MG OR CA OR CE OR LA)(L)C(L)H(
                 L)O)/ELS
L49          594 SEA FILE=HCAPLUS ABB=ON  L47
L50           16 SEA FILE=HCAPLUS ABB=ON  L49 AND PHARMAC?/SC,SX
L51            3 SEA FILE=HCAPLUS ABB=ON  L49 AND THU/RL
L53            2 SEA FILE=HCAPLUS ABB=ON  L49 AND ?PHOSPHAT?(3A)BIND?
L54            1 SEA FILE=HCAPLUS ABB=ON  L49 AND HYPERPHOS?
L55           13 SEA FILE=HCAPLUS ABB=ON  L49(L)?TALCITE?
L56           31 SEA FILE=HCAPLUS ABB=ON  L42 OR L43 OR L45 OR L46 OR L50 OR
                 L51 OR L53 OR L54 OR L55
L57          152 SEA FILE=REGISTRY ABB=ON  L47(L)5/ELC.SUB
L58           98 SEA FILE=REGISTRY ABB=ON  L57 NOT 1-50/NR
L59          198 SEA FILE=HCAPLUS ABB=ON  L58
L60          184 SEA FILE=HCAPLUS ABB=ON  (L56 OR L59) NOT L56
L61            9 SEA FILE=HCAPLUS ABB=ON  L60 AND ?PHOSPHAT?
L62           37 SEA FILE=HCAPLUS ABB=ON  L59(L)(PREP OR IMF OR SPN)/RL
L63           31 SEA FILE=HCAPLUS ABB=ON  (L62 OR L61 OR L56) NOT (L61 OR L56)
L64           18 SEA FILE=HCAPLUS ABB=ON  L63 NOT GEOLOG?/SC
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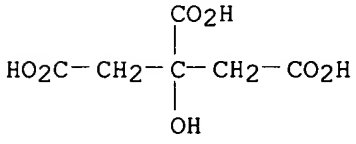
L64 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:510454 HCAPLUS
DN 136:36840
TI Synthesis and study of heteronuclear citrates
AU Shvelashvili, A.; Beshkenadze, I.; Mestiashvili, N.; Zhorzholiani, N.; Gogua, L.; Tavberidze, M.; Tsutsunava, T.
CS P. Melikishvili Inst. Phys. Org. Chem., Georgian Acad. Sci., Georgia
SO Bulletin of the Georgian Academy of Sciences (2000), 162(3), 472-474
CODEN: BGASFC; ISSN: 1560-0262
PB Georgian Academy of Sciences
DT Journal
LA English
AB Eleven heteronuclear citrate coordination compds. with general formula Mg2MeL2.cntdot.nH2O and Mn2MeL2.cntdot.nH2O (Me = Mn, Zn, Fe, Co, Cu, Ni; L = citrate ion; n = 2-4) were prepd. The prepn. used solns. of acetate salts of the metals and citric acid in appropriate molar ratios. The identity of the prepd. compds. was confirmed by microelementary anal., m.p. detn., and thermogravimetric anal. The biostimulating effects of these compds. were expected to be stronger than the effects of simple salts of the metals contained. The use of these coordination compds. as feed supplements in poultry nutrition was evaluated. Leghorn chickens fed the Mg2MeL2.cntdot.nH2O coordination compds. had 7-13% higher body wt. gains probably due to bactericidal and bacteriostatic properties of the compds.
IT **380374-41-4P**
RL: FFD (Food or feed use); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(citrate-metal heteronuclear coordination compds. prepn. and characterization and possible use in poultry nutrition)
RN 380374-41-4 HCAPLUS
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, iron(3+) magnesium salt (2:1:2), tetrahydrate (9CI) (CA INDEX NAME)



●1/2 Fe(III)

● Mg

●2 H_2O

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l64 bib abs hitstr 2-18

L64 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:489334 HCAPLUS
DN 135:94268
TI Process and catalysts for dehydrogenation of hydrocarbon feedstocks
IN Spamer, Alta; Nkosi, Bongani Simon
PA Sasol Technology (Proprietary) Ltd., S. Afr.
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001047841	A1	20010705	WO 2000-IB1903	20001219

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-173381P P 19991228

AB A process for dehydrogenating a hydrocarbon feedstock is provided. The process includes contacting the hydrocarbon feedstock with a catalyst obtained by calcining a mixed metal oxide system consisting of [Fe(II)sMg(II)tZn(II)wCu(II)xMn(II)y Co(II)z] [Cr(III)aFe(III)bGa(III)cAl(III)d Au(III)e] [OH]p[X]q.cntdot.YH2O where: (i) s, t, w, x, y and z each denotes an integer or a decimal no. from 0 to 20,0; (ii) the sum of r, s, t, w, x, y and z is from 3,0 to 20,0; (iii) a, b, c, d and e each denotes an integer or a decimal no. from 0 to 2,0; (iv) the sum of a, b, c, d, e and f is from 1,0 to 5,0; (v) p denotes an integer from 4 to 44; (vi) X denotes any anion with a charge of either 1 or 2; (vii) q denotes an integer or a decimal no. from 0,5 to 2,0; and (viii) Y denotes an integer from 3 to 7, thereby to dehydrogenate at least one hydrocarbon in the hydrocarbon feedstock.

IT **11090-40-7P**
RL: CAT (Catalyst use); **IMF (Industrial manufacture); PREP (Preparation)**; USES (Uses)
(process and catalysts for dehydrogenation of hydrocarbon feedstocks)

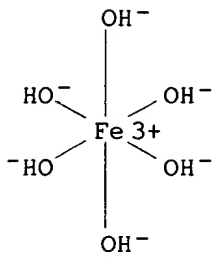
RN 11090-40-7 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium carbonate hydroxide (2:6:1:4), tetrahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 98714-05-7
CMF C O3 . 2 Fe H6 O6 . 4 H O . 6 Mg

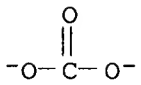
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:440908 HCAPLUS
DN 135:231380
TI Rapid removal of dilute lead from water by Pyroaurite-like compound
AU Seida, Y.; Nakano, Y.; Nakamura, Y.
CS Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Midori-ku, Yokohama, 226-8502, Japan
SO Water Research (2001), 35(10), 2341-2346
CODEN: WATRAG; ISSN: 0043-1354
PB Elsevier Science Ltd.
DT Journal
LA English
AB Rapid removal of dissolved dil. Pb by pyroaurite-like compd. MgxFey(OH)2(x+y) (CO32-)y/2.cntdot.mH2O (anionic clay: one of layered double hydroxides) from water was studied through batch and column expts. The Pb-removal property of the compd. was evaluated as a function of concn. of Pb in the treated soln., space velocity (Sv) of the soln. in the column packed with the compd., pH of the soln. and contaminated humic substance. The compd. showed a highly effective Pb-removal property that was comparable to the other conventional adsorbents. The Pb was removed rapidly by the column packed with the compd. over the wide range of the Sv. The buffering pH function of the compd. contributed to the Pb removal producing weak-alkali atm. The contamination of humic substance in the treated soln. reduced the Pb removal largely depending on its amt. The effectiveness of the compd. for the rapid Pb removal was confirmed through a series of expts.
IT **145424-09-5P**, Iron magnesium carbonate hydroxide
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(rapid removal of dil. lead from water by Pyroaurite-like compd.)
RN 145424-09-5 HCAPLUS
CN Iron magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

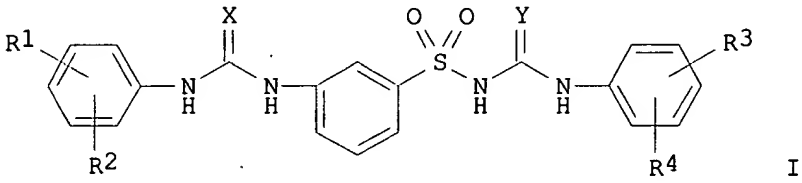
Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Fe	x	7439-89-6
CO3	x	3812-32-6

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

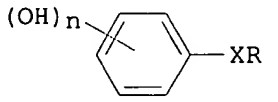
L64 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:633456 HCAPLUS
DN 131:279306
TI Thermal printing material providing durable image
IN Sumikawa, Naomi; Nagai, Tomoaki; Fukuji, Tadakazu; Hamada, Kaoru; Wakita, Yutaka
PA Nihon Seishi K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11268424	A2	19991005	JP 1998-77270	19980325

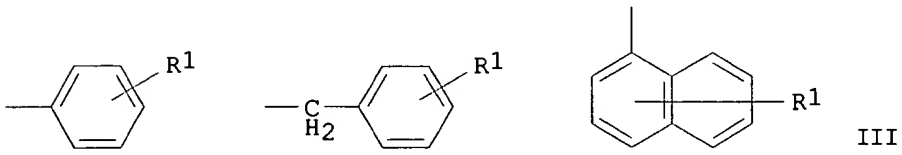
OS MARPAT 131:279306
GI



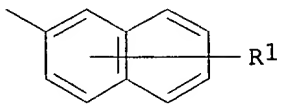
I



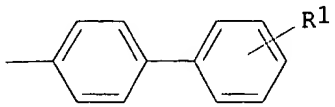
II



III



IV



V

AB The material, comprising a support coated with a heat-sensitive layer contg. a leuco dye-type coloring component consisting of a basic leuco dye and an org. color developer and a metal chelate-type coloring component

consisting of an electron-acceptor and an electron donor, employs .gtoreq.1 compd. I (R1-4 = H, C1-4 alkyl, halo, R1 and R2 or R3 and R4 may link each other to form an arom. ring; X, Y = O or S) for the color developer, a C16-35 higher fatty acid metal double salt for the electron acceptor, and a polyhydric hydroxyarom. compd. II [R = C18-35 alkyl, C6H4R1, Ch2C6H4R1, III-V (R1 = C18- 35 alkyl); n = 2 or 3; X = CH2, CO2, CO, O, CONH, CONR' (R' = C18-35 alkyl), SO2, SO3, SO2NH] for the electron donor. The material provides a high d. image with improved storage stability.

IT **155163-26-1P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(electron acceptor; thermal printing material contg. leuco dye coloring component and metal chelating coloring component)

RN 155163-26-1 HCAPLUS
CN Octadecanoic acid, calcium iron salt (9CI) (CA INDEX NAME)

$HO_2C-(CH_2)_{16}-Me$

●x Ca

●x Fe(x)

L64 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:684240 HCAPLUS
DN 130:75208
TI The effect of iron on the crystalline phases formed upon thermal decomposition of Mg-Al-Fe hydrotalcites
AU Fernandez, Jose Maria; Ulibarri, Maria Angeles; Labajos, Francisco M.; Rives, Vicente
CS Facultad de Ciencias, Departamento de Quimica Inorganica e Ingenieria Quimica, Universidad de Cordoba, Cordoba, Spain
SO Journal of Materials Chemistry (1998), 8(11), 2507-2514
CODEN: JMACEP; ISSN: 0959-9428
PB Royal Society of Chemistry
DT Journal
LA English
AB Layered double hydroxides (LDH) contg. MgII, FeIII, AlIII in the brucite-like layers and interlayer carbonate (with a const. MII/MIII ratio but varying AlIII/FeIII ratios) were prepd. and characterized by x-ray diffraction, thermal anal., FTIR and UV-visible/diffuse reflectance spectroscopies, temp.-programmed redn. and sp. surface area assessment through low temp. adsorption of N2. A Mg,Al-LDH, but with intercalated hexacyanoferrate(III), was also prepd. and characterized, in which simultaneous formation of the carbonate analog did not occur. Thermal decompn. in air at 450 and 750.degree. leads to MgO and poorly crystd. MgFe2O4 spinel (crystallinity increasing with the Fe content), while for the hexacyano-contg. sample, crystn. only is obsd. after calcination at 900.degree.. This different behavior was related to the initial location of the Fe ions.

IT **203213-08-5P**
RL: PRP (Properties); RCT (Reactant); **SPN (Synthetic preparation)**

; **PREP (Preparation)**; RACT (Reactant or reagent)
(prepn., surface area, lattice parameters and thermal redn. and decompn.)
RN 203213-08-5 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe0.25Mg0.75(CO3)0.13(OH)2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 203213-07-4
CMF C O3 . Fe . H O . Mg
CCI TIS

CM 2

CRN 14280-30-9
CMF H O

OH^-

CM 3

CRN 7439-95-4
CMF Mg

Mg

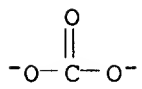
CM 4

CRN 7439-89-6
CMF Fe

Fe

CM 5

CRN 3812-32-6
CMF C O3



RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:792991 HCAPLUS
DN 123:203755

TI Catalyst composition for making synthesis gas by partial oxidation of hydrocarbyl
IN Bhattacharyya, Alakananda; Kleefisch, Mark S.; Udovich, Carl A.
PA Amoco Corp., USA
SO U.S., 12 pp. Cont.-in-part of U.S. 5,246,899.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5439861	A	19950808	US 1993-48667	19930416
	US 5246899	A	19930921	US 1991-745902	19910816
	US 5354932	A	19941011	US 1993-93768	19930719
	US 5614163	A	19970325	US 1995-507568	19950726
PRAI	US 1991-745902	A2	19910816		
	US 1992-993419	B2	19921221		
	US 1992-881752	B1	19920508		
	US 1993-48667	A3	19930416		

AB A synthesis gas comprising hydrogen and carbon monoxide prepd. by partial oxidn. of hydrocarbyl compds. using a source of oxygen comprising mol. oxygen, carbon dioxide, their mixts. is prepd. in the presence of a catalyst comprising thermally stable mixts. formed by heat treating a hydrotalcite-like compd. The catalytic materials are resistant to deactivation and particularly resistant to coke formation in the process.

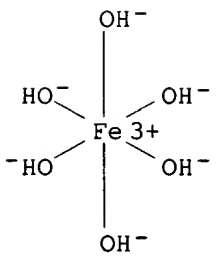
IT **168074-84-8P**
RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)
(catalyst precursor; catalyst compn. for making synthesis gas by partial oxidn. of hydrocarbyl)
RN 168074-84-8 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium carbonate (2:4:1), dihydrate (9CI) (CA INDEX NAME)

CM 1

CRN 96492-32-9
CMF C O3 . 2 Fe H6 O6 . 4 Mg

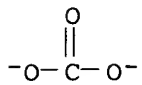
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3



L64 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:751168 HCAPLUS
DN 123:245111
TI Synthesis and characterization of pyroaurite
AU Hansen, Hans Christian Bruun; Koch, Christian Bender
CS Chemistry Department, Royal Veterinary and Agricultural University, Thorvaldsensvej 40, DK-1871 Frederiksberg C., Copenhagen, Den.
SO Applied Clay Science (1995), 10(1-2), 5-19
CODEN: ACLSER; ISSN: 0169-1317
PB Elsevier
DT Journal
LA English
AB Ten samples of pyroaurite, [Mg(8-x)Fe(III)x(OH)16]x+[(CO3)x/2.cntdot.yH2O] x- with x varying between 1.45 and 3.07, were synthesized by oxidn. of Fe(II) with air in Mg nitrate solns. at different pH and using different rates of oxidn. The morphol. and crystal size of the ppts. vary as a function of x and hydrothermal treatment following pptn. The unit cell parameter a0 varies insignificantly with x, whereas c0 decreases linearly with increasing x. From IR spectroscopy the only interlayer anion present is carbonate. The carbonate symmetry is distorted in the samples with disordered layer stacking and also following heating of the sample in KBr tablets. The absorption bands due to stretching vibrations of structural OH (3Mg-OH, 2MgFe(III)-OH, Mg2Fe(III)-OH) varies continuously in position and intensity as a function of x. The parameters of the Moessbauer spectra at 298 K reveal a const. isomer shift (0.35 mm s-1) and increasing quadrupole splitting with increasing values of x. Considering the chem. anal. and known speciation of anions and cations the ideal formula reveal a charge imbalance between +0.77 and -1.09 equiv per formula unit and depends linearly on x. This may be explained by amphoteric properties of the hydroxyl groups. A decreasing H bond length in the interlayer with increasing x values may explain the major decrease in c0. For const. a0 this implies an increasing distortion of the Fe-octahedra contributing to an increase of the mean quadrupole splitting of the Moessbauer spectra.
IT **168979-38-2P**, Iron magnesium carbonate hydroxide (Fe3.07Mg4.93(CO3)1.15(OH)16) **168979-39-3P**, Iron magnesium carbonate hydroxide (Fe2.66Mg5.34(CO3)1.14(OH)16) **168979-40-6P**, Iron magnesium carbonate hydroxide (Fe2.57Mg5.43(CO3)1.17(OH)16) **168979-41-7P**, Iron magnesium carbonate hydroxide (Fe2.55Mg5.45(CO3)1.15(OH)16) **168979-42-8P**, Iron magnesium carbonate hydroxide (Fe2.3Mg5.7(CO3)1.18(OH)16) **168979-43-9P**, Iron magnesium carbonate hydroxide (Fe2.25Mg5.75(CO3)1.09(OH)16) **168979-44-0P**, Iron magnesium carbonate hydroxide (Fe2.16Mg5.84(CO3)1.19(OH)16) **168979-45-1P**, Iron magnesium carbonate hydroxide (Fe2.07Mg5.93(CO3)1.24(OH)16) **168979-46-2P**, Iron magnesium carbonate hydroxide (Fe1.77Mg6.23(CO3)1.33(OH)16) **168979-47-3P**, Iron magnesium carbonate hydroxide (Fe1.45Mg6.55(CO3)1.27(OH)16)
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(prepn. and layer charge and dependence of morphol. and crystal size of

pyroaurite on compn.)
RN 168979-38-2 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe3.07Mg4.93(CO3)1.15(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	4.93	7439-95-4
Fe	3.07	7439-89-6
CO3	1.15	3812-32-6

RN 168979-39-3 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.66Mg5.34(CO3)1.14(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.34	7439-95-4
Fe	2.66	7439-89-6
CO3	1.14	3812-32-6

RN 168979-40-6 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.57Mg5.43(CO3)1.17(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.43	7439-95-4
Fe	2.57	7439-89-6
CO3	1.17	3812-32-6

RN 168979-41-7 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.55Mg5.45(CO3)1.15(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.45	7439-95-4
Fe	2.55	7439-89-6
CO3	1.15	3812-32-6

RN 168979-42-8 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.3Mg5.7(CO3)1.18(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.7	7439-95-4
Fe	2.3	7439-89-6
CO3	1.18	3812-32-6

RN 168979-43-9 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.25Mg5.75(CO3)1.09(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.75	7439-95-4
Fe	2.25	7439-89-6
CO3	1.09	3812-32-6

RN 168979-44-0 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.16Mg5.84(CO3)1.19(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.84	7439-95-4
Fe	2.16	7439-89-6
CO3	1.19	3812-32-6

RN 168979-45-1 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe2.07Mg5.93(CO3)1.24(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	5.93	7439-95-4
Fe	2.07	7439-89-6
CO3	1.24	3812-32-6

RN 168979-46-2 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe1.77Mg6.23(CO3)1.33(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	6.23	7439-95-4
Fe	1.77	7439-89-6
CO3	1.33	3812-32-6

RN 168979-47-3 HCAPLUS
CN Iron magnesium carbonate hydroxide (Fe1.45Mg6.55(CO3)1.27(OH)16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	16	14280-30-9
Mg	6.55	7439-95-4
Fe	1.45	7439-89-6
CO3	1.27	3812-32-6

L64 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:324611 HCAPLUS
DN 122:95020
TI Preparation, Characterization, and Moessbauer Spectroscopy of Organic Anion Intercalated Pyroaurite-like Layered Double Hydroxides
AU Raki, Laiela; Rancourt, Denis G.; Detellier, Christian
CS Ottawa-Carleton Chemistry Institute, University of Ottawa Campus, Ottawa, ON, K1N6N5, Can.
SO Chemistry of Materials (1995), 7(1), 221-4
CODEN: CMATEX; ISSN: 0897-4756
PB American Chemical Society
DT Journal
LA English
AB Pyroaurite is a layered double hydroxide, a hydrotalcite-like lamellar mineral Mg6Fe2(OH)16CO3.cntdot.4H2O. Organopyroaurite derivs., [Mg6Fe2(OH)16][O2C-(CH2)p-CO2H]2.cntdot.xH2O with 1 .ltoreq. p .ltoreq. 14, were prepd. by copptn. of the corresponding nitrates in basic medium. The interlamellar distance of these organominerals depends on the size of the intercalated anion. In the case of the dicarboxylate anions, it is directly related to the no. of C atoms in the aliph. chain, which, plausibly, adopts an all-trans conformation, almost perpendicular to the mineral layers. 13C CP/ and DD/MASNMR show the high rigidity of the aliph. chain. Moessbauer spectroscopy measures the av. degree of distortion of the Fe(III) local environment (via the av. quadrupole splitting, .ltbbrac.QS.rtbbrac.) and the intrasample Fe(III) local environment variability (via the width, .sigma.QS, of the QS distribution). Both .ltbbrac.QS.rtbbrac. and .sigma.QS change discontinuously on going from CO32- to dicarboxylate intercalates, to be continuous functions of p for 1 .ltoreq. p .ltoreq. 12, and to change discontinuously again on going from p = 12-14. These behaviors have simple structural interpretations.
IT **159089-60-8P 159089-62-0P**
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and Moessbauer spectra and interlayer distance in)
RN 159089-60-8 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium hydroxide tetradecanedioate (1:3:2:1), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-59-5
CMF C14 H25 O4 . Fe H6 O6 . 2 H O . 3 Mg

CM 2

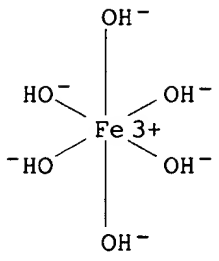
CRN 114746-11-1
CMF C14 H25 O4

$HO_2C-(CH_2)_{12}-CO_2^-$

CM 3

CRN 60298-80-8
CMF Fe H6 O6

CCI CCS



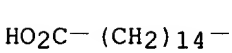
RN 159089-62-0 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium hexadecanedioate hydroxide (1:3:1:2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-61-9
CMF C16 H29 O4 . Fe H6 O6 . 2 H O . 3 Mg

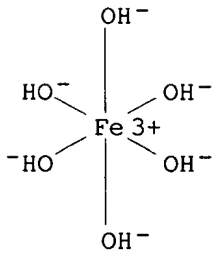
CM 2

CRN 114746-13-3
CMF C16 H29 O4



CM 3

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



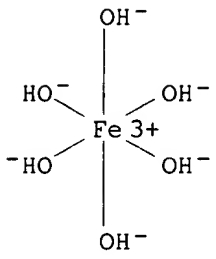
IT **159089-52-8P**, preparation **159089-54-0P**
159089-56-2P, preparation **159089-58-4P**
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and effect of carboxylate chain length on structure and Moessbauer spectra and interlayer distance in)
RN 159089-52-8 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium ethanedioate hydroxide (1:3:1:2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-51-7
CMF C2 H O4 . Fe H6 O6 . 2 H O . 3 Mg

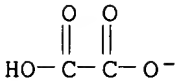
CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 920-52-5
CMF C2 H O4



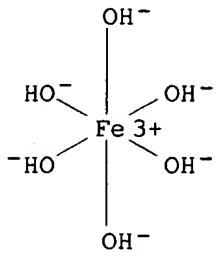
RN 159089-54-0 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium hydroxide octanedioate (1:3:2:1), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-53-9
CMF C8 H13 O4 . Fe H6 O6 . 2 H O . 3 Mg

CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 29669-82-7
CMF C8 H13 O4

$HO_2C-(CH_2)_6-CO_2^-$

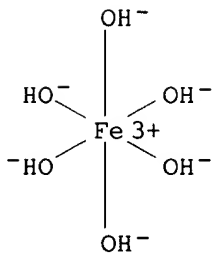
RN 159089-56-2 HCAPLUS
CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium decanedioate hydroxide (1:3:1:2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-55-1
CMF C10 H17 O4 . Fe H6 O6 . 2 H O . 3 Mg

CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 48065-91-4
CMF C10 H17 O4

$HO_2C-(CH_2)_8-CO_2^-$

RN 159089-58-4 HCAPLUS

CN Ferrate (Fe(OH)63-), (OC-6-11)-, magnesium dodecanedioate hydroxide (1:3:1:2), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 159089-57-3
CMF C12 H21 O4 . Fe H6 O6 . 2 H O . 3 Mg

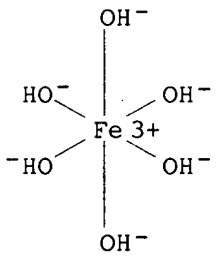
CM 2

CRN 85303-76-0
CMF C12 H21 O4

$HO_2C-(CH_2)_{10}-CO_2^-$

CM 3

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



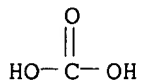
L64 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:181547 HCAPLUS
DN 120:181547
TI Synthesis of the new compound CaFe(CO3)2 and experimental constraints on the (Ca,Fe)CO3 join
AU Davidson, Paula M.; Symmes, Gregory H.; Cohen, Barbara A.; Reeder, Richard J.; Lindsley, Donald H.
CS Cent. High Pressure Res., State Univ. New York, Stony Brook, NY, 11794-2100, USA
SO Geochimica et Cosmochimica Acta (1993), 57(23-24), 5105-9
CODEN: GCACAK; ISSN: 0016-7037
DT Journal
LA English
AB Synthesis of the new (disordered) compd. CaFe(CO3)2 was achieved using Fe-substituted CaCO3 (Cc ss) + Ca-substituted FeCO3 (Sid ss) as starting materials, and high CO2 pressures. High pressure (20-30 kbar) is needed to stabilize FeCO3 to sufficiently high temps. for disordered CaFe(CO3)2 to form. Expts. provide reversed compns. of coexisting disordered phases in the Ca-Fe join and locate the solvus temp. for CaFe(CO3)2 between 815 and 845.degree. at 30 kbar. Calcd. phase relations predict that the stability of ordered CaFe(CO3)2 is limited to T < .apprx.450.degree. by the breakdown to Cc ss + Sid ss. A comparison of the unit-cell vol. measured for disordered CaFe(CO3)2 vs. that estd. for ordered CaFe(CO3)2

suggest that increasing pressure stabilizes the disordered phase.

IT **153504-01-9P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and thermal reaction of calcium- and iron-rich forms of, under high carbon dioxide pressure)

RN 153504-01-9 HCAPLUS

CN Carbonic acid, calcium iron salt (9CI) (CA INDEX NAME)



●x Ca

●x Fe(x)

L64 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:489249 HCAPLUS

DN 111:89249

TI Synthesis of iron-brucite, coalingite, and pyroaurite in the magnesia-iron-oxygen-water (carbon dioxide) system

AU Delnavaz, H.; Allmann, R.

CS Inst. Mineral., Philipps-Univ., Marburg, D-3550, Fed. Rep. Ger.

SO Z. Kristallogr. (1988), 183(1-4), 175-8
CODEN: ZEKRDZ; ISSN: 0044-2968

DT Journal

LA English

AB Fe was oxidized and reduced in brucite-like M(OH)2 without the degrdn. of these layers, yielding compds. like Fe-brucite, (Mg,Fe)(OH)2: pyroaurite {[Mg3Fe(OH)8](CO3)0.5.2H2O}, coalingite {[Mg5Fe(OH)12]2CO3.2H2O]}, or green rust {[FeII3FeIII(OH)8](CO3)0.5.2H2O}. Fe-brucite with <21 at% Fe [ao 3.1695(2), co 4.7412(5) .ANG.], was prepd. at 300.degree. and 3 kbar total pressure starting from .alpha.-Fe + MgO + H2O (oxidn.) or pyroaurite (redn.). This prepn. is very pressure-sensitive (only 9 at% Fe at 1 kbar). Pyroaurite was obtained by pptg. solns. of MgCl2 and FeCl2 with NaOH in open air. The ppt. was a solid soln. with green rust: .apprxeq.[Mg0.57Fe(II)0.11Fe(III)0.32(OH)2][(CO3)0.16.0.8H2O], a 3.0956(4), c 3 .times. 7.605(7) .ANG.. Partial redn. of this pyroaurite as well as partial oxidn. of Fe-brucite led to coalingite with a 3.12, c 3 .times. 12.62 .ANG.. All prepd. products were rather fine-grained with broad x-ray reflections. c/a As well as [2.theta.(201)-2.theta.0(103)] were used for the detn. of the Fe content in Fe-brucite. Natural Fe-brucite with high Fe contents (xFe>0.2) was only formed in the lower crust at temps. <350.degree. and pressures .gtoreq.3 kbar.

IT **12179-78-1P**, Coalingite
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and crystal structure of)

RN 12179-78-1 HCAPLUS

CN Coalingite (Fe2Mg10(CO3)(OH)24.2H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

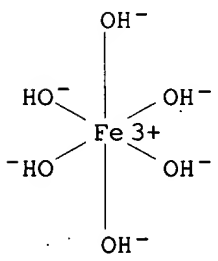
IT **12351-92-7P**, Pyroaurite
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. from .alpha.-iron and magnesium oxide in presence of water and redn. of)
RN 12351-92-7 HCAPLUS
CN Pyroaurite (Mg6[Fe2(CO3)O8].12H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:69599 HCAPLUS
DN 106:69599
TI Synthesis of anionic clay minerals (mixed metal hydroxides, hydrotalcite)
AU Reichle, Walter T.
CS Spec. Chem. Div., Union Carbide Corp., Bound Brook, NJ, 08805, USA
SO Solid State Ionics (1986), 22(1), 135-41
CODEN: SSIOD3; ISSN: 0167-2738
DT Journal
LA English
AB A no. of approaches to the synthesis of a class of anionic clay minerals (M2+aM3+b(OH)2a + 2b(X-)2b.xH2O; M2+ = Mg, Ni, Co, Zn, Cu, etc.; M3+ = Al, Cr, Fe, Sc; M2+/M3+ .apprx. 1-5; X- = water and base stable anion; x = 0-6) are summarized. The most general method involves the mixing of a concd. aq. soln. of M2+ and M3+ with aq. hydroxide-carbonate to yield an amorphous gel followed by crystn. at 60-325.degree.. For a no. of these materials, the synthetic latitudes with respect to the nature of M2+, M3+, the M2+/M3+ ratio, the soln. pH, and the crystn. temp. are detailed. The crystn. temp. and time affect the particle size, the morphol., the surface area, and the appearance of foreign phases. The incorporation of various interstitial anions by exchange or synthesis is discussed.
IT **98714-05-7P**
RL: **PREP (Preparation)**
(synthesis of, anionic clay mineral)
RN 98714-05-7 HCAPLUS
CN Ferrate (Fe(OH)63-), magnesium carbonate hydroxide (2:6:1:4) (9CI) (CA INDEX NAME)

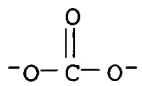
CM 1

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 2

CRN 3812-32-6
CMF C O3



L64 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:582728 HCAPLUS
DN 103:182728
TI Popout formation on concrete surfaces caused by weathering of serpentine aggregate
AU Izumi, I.; Shinozaki, M.; Kasami, H.
CS Tech. Res. Lab., Takenaka Komuten Co., Ltd., Tokyo, Japan
SO VTT Symp. (1984), 50(Int. Conf. Durability Build. Mater. Compon., 3rd, Vol. 3), 105-17
CODEN: VTTSE9; ISSN: 0357-9387
DT Journal
LA English
AB Examn. of tests relating to popout formation on concrete indicated that the popout resulted from the oxidn. and carbonation of high-Fe brucite, which existed in the serpentine crushed stone aggregate, to form coalingite. All the popout cases were related to crushed stone from an ore quarry. Concrete made with this stone quickly deteriorates on exposure to atm. air. Gas-impermeable coatings can prevent the deterioration. The use of serpentine crushed stone from other quarries presents no problem.
IT **12179-78-1P**
RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, from ferroan brucite in serpentine concrete aggregate)
RN 12179-78-1 HCAPLUS
CN Coalingite (Fe2Mg10(CO3)(OH)24.2H2O) (9CI) (CA INDEX NAME)

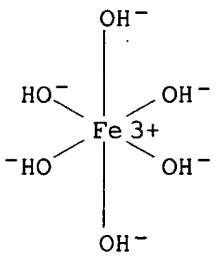
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:564090 HCAPLUS
DN 103:164090
TI Magnesium incrustations in the leaching process at the "Rene Ramos Latour" plant (Nicaro)
AU Garcia Diaz, Juan; Fiffe Muguercia, Luis J.
CS Fac. Quim., Univ. Oriente, Cuba
SO Tecnol. Quim. (1985), 6(1), 45-54
CODEN: TEQUD8; ISSN: 0253-9276
DT Journal
LA Spanish
AB In the process of leaching serpentinic Mg, following thermal decompn. of serpentine, hard incrustations form at several points in the turboaerators and in the leaching tank. The incrustations formed in the leaching process are comprised essentially of MgCO3.2H2O and Mg6Fe2CO3(OH)16.4H2O. Crystn. and supercrystn. were obsd. in all liquors. In the cooler inlet liquors and the liquors of the 3 leaching stages, which have the highest temps., crystn. of Mg compds. occurred with a period of induction.
IT **98714-05-7P**
RL: **PREP (Preparation)**
(incrustations, formation of, in leaching of serpentine for magnesium recovery)
RN 98714-05-7 HCAPLUS
CN Ferrate (Fe(OH)63-), magnesium carbonate hydroxide (2:6:1:4) (9CI) (CA

INDEX NAME)

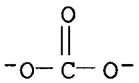
CM 1

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 2

CRN 3812-32-6
CMF C O3

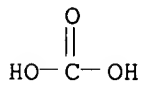


L64 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:50081 HCAPLUS
DN 102:50081
TI Concrete structure damage by the alkali-aggregate reaction in Japan: a case study
AU Kawamura, Mitsunori; Takemoto, Kunio; Hasaba, Shigemasa
CS Fac. Technol., Kanazawa Univ., Kanazawa, 920, Japan
SO Semento Gijutsu Nenpo (1983), (37), 136-9
CODEN: SGNEAD; ISSN: 0370-9914
DT Journal
LA Japanese
AB Petrog., x-ray diffraction, DTA, and x-ray anal. studies and SEM observation were made on some damaged concrete structures in Japan. The damage (crack formation and popouts) were caused by the alkali-aggregate reaction between portland cement and the glass phase in bronzite andesite or by alteration of peridotite and serpentinite contg. brucite to form coalingite (Mg10Fe2CO3(OH)24.2H2O) in the concrete.
IT **12179-78-1P**
RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, in concrete alkali-aggregate reaction, damage in relation to)
RN 12179-78-1 HCAPLUS
CN Coalingite (Fe2Mg10(CO3)(OH)24.2H2O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2002 ACS

AN 1983:171809 HCAPLUS
DN 98:171809
TI Preparation and properties of pyroaurite-like hydroxy minerals
AU Hashi, K.; Kikkawa, S.; Koizumi, M.
CS Inst. Sci. Ind. Res., Osaka Univ., Osaka, 567, Japan
SO Clays Clay Miner. (1983), 31(2), 152-4
CODEN: CLCMAB; ISSN: 0009-8604
DT Journal
LA English
AB The pyroaurite-like hydroxy mineral, FexMg1-x(OH)2(CO3)x/2.nH2O, was synthesized from MgCl2 and FeCl3 in NaOH soln. contg. Na2CO3 with aging the ppts. 10 d at 60.degree.. The pyroaurite-like compds. at x = 0.15-0.27 were prepd. with contamination by other phases. The effect of x was studied on the lattice parameters, IR spectra, and thermal behavior. From IR data with increasing x, the amt. of interlayered carbonate increases with an increase of pos. charge in the host brucite-like layer. The substitution of Mg2+ with smaller Fe3+ ions decreases the a parameter.
IT **85530-18-3DP**, basic
RL: **PREP (Preparation)**
(synthesis, IR spectrum, thermal decompn. and x-ray diffraction of)
RN 85530-18-3 HCAPLUS
CN Carbonic acid, iron(2+) magnesium salt, hydrate (9CI) (CA INDEX NAME)



●x Fe(II)

●x Mg

●x H_2O

L64 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1977:510727 HCAPLUS
DN 87:110727
TI Pyrocatecholate and semiquinolate complexes of transition metals
AU Razuvaev, G. A.; Shal'nova, K. G.; Abakumova, L. G.; Abakumov, G. A.
CS Inst. Khim., Gorkiy, USSR
SO Izv. Akad. Nauk SSSR, Ser. Khim. (1977), (7), 1642-5
CODEN: IASKA6
DT Journal
LA Russian
AB 3,5-Di-tert-butyl-1,2-benzosemiquinol (HL) in KOH reacted with metal salts to give ML3 (M = Cr, Mo, W, V, La, Fe, Ti). K3MQ3 (H2Q = 3,5-di-tert-butylpyrocatechol; M = La, Fe, Cr), LaFeQ3, and Tl3CrQ3 were also prepd. K3FeQ3 is easily oxidized by FeCl3 to FeL3. LaFeQ3 is a binuclear complex in which La and Fe are in a tetrahedral environment, 2

of the ligands bridge the 2 central atoms.

IT **64236-92-6P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. of)
RN 64236-92-6 HCAPLUS
CN Lanthanum, tris[3,5-bis(1,1-dimethylethyl)-1,2-benzenediolato(2-)]iron- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1975:531720 HCAPLUS
DN 83:131720
TI Preparation and characterization of transition metal carbonyl derivatives of magnesium. Evidence for direct metal-metal bonding between magnesium and a transition metal
AU McVicker, G. B.
CS Corp. Res. Lab., Exxon Res. and Eng. Co., Linden, N. J., USA
SO Inorg. Chem. (1975), 14(9), 2087-92
CODEN: INOCAJ
DT Journal
LA English
AB BxMg(M)2 [B = THF, pyridine; M = CpFe(CO)2, CpMo(CO)3, CpMo(CO)2PBu3, CpMo(CO)2PMePh2, Co(CO)4, Co(CO)3PMePh2; Cp = cyclopentadienyl] were prepd. by redn. of M with Mg(Hg) in B or by treatment of MI with Mg powder in B. The variability of the no. of Lewis bases (B) coordinated to Mg, leading to either 4 (x = 2) or 6 (x = 4) coordination, can be related to the nucleophilicity of the transition metal carbonyl anion. Six-coordinate Mg complexes possess carbonyl bridges which are characterized by the presence of extremely low ir carbonyl stretching frequencies. Four-coordinate Mg complexes, depending upon the nucleophilicity of the transition metal carbonyl anion, can possess either carbonyl bridges or a direct Mg-transition metal bond. Complexes contg. a Mg-transition metal linkage exhibit soln. and spectroscopic properties similar to those given by covalent heterometal metal-metal bonded compds.
IT **55800-05-0P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. of)
RN 55800-05-0 HCAPLUS
CN Magnesium, bis[.mu.-(carbonyl-C:O)]bis[carbonyl(.eta.5-2,4-cyclopentadien-1-yl)iron]tetrakis(tetrahydrofuran)- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2002 ACS
AN 1968:461350 HCAPLUS
DN 69:61350
TI Alkali carbonate reaction products found by petro-graphic examination of mortar bars and prisms of carbonate aggregate after use in expansion tests
AU Walker, Hollis N.
CS Virginia Highway Res. Counc., Charlottesville, Va., USA
SO U.S. Clearinghouse Fed. Sci. Tech. Inform., PB Rep. (1967), PB-177 604 36 pp. Avail.: CFSTI.
From: U.S. Govt. Res. Develop. Rep. 1968, 68(9), 87
CODEN: XCCRAO
DT Report
LA English
AB Mortar bars prepd. under the ASTM cooperative test series for alkali carbonate reaction were examd. by 3 procedures: (1) optical methods using reflected light, (2) optical methods with transmitted light (thin

sections), (3) x-ray powder diffraction methods. The reaction products from rock prisms prepd. under the same program were examd. by x-ray diffraction and by optical methods. X-ray examn. of the most expansive aggregates from the mortar bars failed to detect any brucite. However, some type of dedolomitization reaction was indicated. The reaction products from the treated prisms indicate that the minerals of the hydrotalcite-sjogrenite groups (complex magnesium carbonate hydroxides) can be the chief products of alkali dedolomitization near the surface of the prisms of dolomitic carbonate aggregate, and that brucite can be the major dedolomitization product in the interior of the aggregate.

IT **12211-53-9P**
RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, in mortar contg. dolomites)

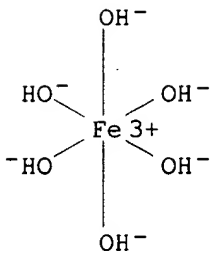
RN 12211-53-9 HCAPLUS
CN Sjogrenite (Mg6(CO3)[Fe(OH)6]2(OH)4.4H2O) (9CI) (CA INDEX NAME)

CM 1

CRN 98714-05-7
CMF C O3 . 2 Fe H6 O6 . 4 H O . 6 Mg

CM 2

CRN 60298-80-8
CMF Fe H6 O6
CCI CCS



CM 3

CRN 3812-32-6
CMF C O3